

50 *years*

of the

University of Maribor

— HALF A CENTURY OF SCHOLARSHIP AND RESEARCH —



University of Maribor Press







50 Years of the University of Maribor

Half a Century of Scholarship and Research

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Editorial

GORAZD MEŠKO, NATALIJA ULČNIK

Editors of the monograph

We would like to thank the authors of the chapters for their contributions to this monograph and for their responsiveness throughout all stages of the publication editing process. Our gratitude also goes to all members of the editorial board, our academic colleagues, Šime Ivanjko, Alja Lipavic Oštir, Dušanka Mičetić Turk, Marko Marhl, Zorka Novak Pintarič and Mojca Tancer Verboten. We also extend our thanks to the technical editor Barbara Erjavec and the language editor Kornelija Sorger. Special thanks go to the reviewers Rado Bohinc, Stane Pejovnik and Peter Umek. We are grateful to everyone who supported our efforts in preparing this important publication marking the 50th anniversary of the University of Maribor, especially the professional services of the rectorate and faculties that provided the necessary data. We sincerely thank Rector Zdravko Kačič for his unwavering support. We also thank all our colleagues over the years of the University of Maribor's development for their immense energy, dedication, and contributions to the university's growth. Today, the university stands out as a modern, research-oriented, and internationally connected institution that values its staff and places students at the forefront, boldly stepping into the future to meet new challenges.

Note

In this monograph, all abbreviations of the names of the faculties of the University of Maribor refer to the original Slovenian names.

Introductory Words on the Occasion of the 50th Anniversary of the University of Maribor

ZDRAVKO KAČIČ

Rector of the University of Maribor

MOJCA TANCER VERBOTEN

Secretary General of the University of Maribor

On 18 September 2025, the University of Maribor celebrates five decades of its existence, development, achievements, and expansion. This celebration is shared by all employees, students, alumni, the university city of Maribor, and the broader community. Since its founding, the University of Maribor has boldly undertaken an extraordinary development journey, growing in the number of students, faculties, study programmes, scientific research fields, and international collaborations. It has expanded beyond the city of Maribor into other towns that recognized the value of knowledge, student presence, and the integration of research with the environment. This monograph, published on the occasion of the University of Maribor's 50th anniversary, outlines half a century of scholarship and research and represents the first comprehensive scientific work on this topic for our alma mater.

The University of Maribor has always operated under the same name and in accordance with the fundamental principles set out in the Magna Charta Universitatum. It is an autonomous institution, uniquely organized due to its geographical and historical heritage, as it extended beyond Maribor's borders from the very beginning. The University of Maribor is a place where new knowledge is created, tested, evaluated, and transferred to the environment in which it operates. It promotes a culture of education, research, and the arts. Freedom in research and education is a fundamental principle of university life.

This monograph presents the formation of the foundations for the University of Maribor, its beginnings and early development, and the significance of its formal establishment and proclamation for the city of Maribor. The founding members of the university were: College of Economics and Commerce Maribor, Technical College Maribor, College of Work Organization Kranj, Pedagogical Academy Maribor, Junior College of Law Maribor, Junior College of Agronomy Maribor, Academic and Study Library Maribor. At its founding, the university comprised 7 faculties that embarked on a shared academic journey with 363 employees, 8,233 students and 22 study programmes. By the year 2000, the University of Maribor had grown to 11 faculties, 1,204 staff members, 21,880 students and 92 study programmes. And the growth did not stop there. Today, the University of Maribor consists of 17 faculties that jointly develop and implement 167 study programmes across the fields of social sciences, humanities, engineering, natural sciences, medicine, health sciences and the arts. The monograph includes detailed contributions on the legal aspects of the university's establishment and development as well as a chronological overview of its 50-year spatial development.

The central part of the monograph is dedicated to a detailed chronological account of the development of educational activities at the University of Maribor, as well as the development of science and the arts. The development of high-quality study programmes has always been driven by employment needs and the social demands of the environment in which the university operates. The university's influence is also reflected in the work of other public institutions in the region, which are entitled to use the term "university" in their names due to their close ties with the University of Maribor. The monograph highlights the role of students, who co-govern the university, act as ambassadors of our knowledge, transfer their expertise into the working environment, and share their professional experiences through faculty

alumni clubs. From its inception, the University of Maribor has been deeply integrated into international networks, maintaining strong collaborations with academic and research institutions beyond Slovenia and Europe. It is a member of the European university network ATHENA and actively contributes to shaping new directions in the European higher education area. Its strategic documents incorporate principles of social responsibility and sustainable development. Education and research are grounded in academic integrity and ethical conduct, monitored through quality assurance mechanisms and periodic institutional re-accreditation.

The final part of the monograph explores the adoption of new approaches to university operations, while fully respecting academic freedom and institutional autonomy.

This first retrospective of the University of Maribor's development reveals that the institution has fulfilled the aspirations envisioned by its founding faculties. Since its establishment, the university has achieved remarkable progress in research, excelling across scientific indicators and standing alongside the highest-quality institutions in various fields. The excellence of the University of Maribor's educational and research work is affirmed by its academic staff and researchers, who have received numerous national and international awards for their pedagogical, scientific, and artistic achievements. Their contributions enhance the university's reputation, and we are deeply grateful to them. Through new investments in research infrastructure, we aim to provide them with a high-quality and stimulating working environment.

May the words and reflections written in this monograph serve as a foundation for future works, capturing the many untold details and memories formed throughout the university's development.

To conclude, we share with our students and colleagues at the University of Maribor the words of Albert Einstein:

"Bear in mind that everything you learn in school is the work of many generations. All this knowledge is a legacy, respect it, enrich it, and one day faithfully hand it on to your children."

UNIVERSITY OF MARIBOR: HALF A CENTURY OF SCHOLARSHIP AND RESEARCH

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The University of Maribor celebrates its fiftieth anniversary on September 18, 2025. Since 1975, it has undergone an extraordinary development journey, and the second-largest public university in Slovenia has positioned itself as a globally recognised university with a high ranking in Times Higher Education (THE). The development of education, research, and art indicates great achievements and many challenges for the future. The young and, at the same time, mature universities face the same challenges as all other modern universities – to provide quality educational programmes that reflect employment needs, to conduct research that contributes to global science, and to adapt to the needs of sustainable development. The chapter presents the period of the university's formation and its founding, the development of education, research, and art, ensuring quality and sustainable development, international cooperation and internationalisation, social action, and appearance in public media, as well as the management and administration of the university.

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1 Introduction

Maribor, a university city that might have become one later if not for the people who believed that Slovenia's once most developed industrial city deserved support through additional local knowledge and knowledge-based development activities. The efforts of many individuals, most notably Vladimir Bračič, a geographer, educator, politician, one of the initiators of the establishment of the University of Maribor and its first Rector, provided the momentum for all subsequent activities related to the university's development.

The formal proclamation of the University of Maribor took place on September 18, 1975, at 10 a.m. in the Union Hall in Maribor. The ceremony began with fanfares announcing the start of the event, followed by the arrival of Rectors and Vice-Rectors from all Yugoslav universities, as well as representatives from eight universities and higher education institutions from Austria, East Germany, Italy, and Hungary. The event was attended by prominent representatives of the Socialist Republic of Slovenia, including: President of the Presidency Sergej Kraigher, President of the Central Committee of the League of Communists of Slovenia France Popit, President of the Assembly Marijan Breclj, President of the Executive Council of the Assembly Andrej Marinc, President of the Republic Conference of the Socialist Alliance of Working People of Slovenia Mitja Ribičič, General Secretary of Slovenian Trade Unions Ivanka Vrhovščak, President of the Republic Conference of the League of Socialist Youth of Slovenia Ljubo Jasnič, Member of the Federation and Presidency of the Socialist Republic of Slovenia Vida Tomšič, representatives of the Yugoslav People's Army, delegates of Slovenians living abroad, and other public socio-political workers. The ceremony was officially opened by Miran Potrč, President of the Council of the University of Maribor and member of the Executive Committee of the Presidency of the Central Committee of the League of Communists of Slovenia. In his address, he emphasized the importance of merging higher education institutions into a university and highlighted its role in educating professionals who would also be active and responsible participants in self-governing decision-making. He stressed that the formal establishment of the university was not the end of the process, but merely the first step toward a new model of self-governing operation involving all university stakeholders: students, teachers, and delegates of associated labour. The University of Maribor was envisioned to further develop as an open institution connected to the working environment, where professionally qualified and socially engaged teachers would

ensure high-quality and Marxist-oriented education and scientific work (Melanšek & Friš, 2025; Univerza v Mariboru, n.d.-j).

Since 1975, extensive social changes have occurred, and we have experienced turbulent times. Broadly speaking, significant socio-political changes began with the fall of the Berlin Wall in 1989. Even more important for Slovenia was its secession from Yugoslavia and the achievement of independence, during which it had initially two public universities: the University of Ljubljana and the University of Maribor. After 1991, notable changes in higher education occurred within the European Union, which Slovenia joined in 2004. One must also mention the global economic crisis that began in 2008 and the associated austerity measures that lasted nationally until 2017. Despite these challenges, the university continued to develop successfully, as its staff increasingly secured European, international, and industry-related projects. Crises often mark turning points in development, and once again, the University of Maribor proved its resilience. During the difficult times of the economic crisis, it paved the way for more intensive development. Finally, the university successfully adapted to another global crisis – the COVID-19 pandemic – which completely transformed work, especially educational and research processes at the university. Amid all the societal changes since its inception, the contribution of the University of Maribor to Slovenia's development, particularly in the eastern region, has been of exceptional importance.

In 1975, Slovenia's second-largest city gained a university. Its role over the past fifty years has extended beyond the city itself, becoming significant for the entire eastern Slovenian region, as well as nationally and internationally. Following the first Rector Vladimir Bračič (1975–1979), the university was led by: Dali Đonlagič (1979–1983), Dane Milavc (1983–1987), Alojz Križman (1987–1993), Ludvik Toplak (1993–2002), Ivan Rozman, (2003–2011), Danijel Rebolj (2011–2015), Igor Tičar (2015–2017) and Zdravko Kačič (2018–)¹ (Univerza v Mariboru, n.d.-j). Each Rector, together with their team, left a unique mark on the development of the University of Maribor. Over the past fifty years, the university has evolved into a modern, high-quality, and ambitious institution that plays an important societal role in tertiary education and research in Slovenia.

¹ In all further references to colleagues, only first and last names will be used, following the example of the list of Rectors of the University of Maribor, except when referring to members of the Slovenian Academy of Sciences and Arts. Academic titles have been omitted, as individuals who shaped the university over different periods held various academic ranks.

2 About the University of Maribor

The role and significance of the university in society are substantial, as it educates individuals pursuing tertiary education in the first, second, and third cycles of higher education. The university offers appropriate educational programmes and develops research activities. The University of Maribor is not merely a higher education institution – it is the heart of academic, cultural, and social development in the city of Maribor and the broader region. Through its activities, the university not only educates new generations of professionals but also connects the city with the scientific world, fosters innovation, and contributes to economic and social progress, opening the region to the international environment. Its role has been and remains crucial for the development of the city, the region, and the entire country. The University of Maribor is unique in its structure, as some of its faculties are located in other towns but still belong to the university. These include the Faculty of Agriculture and Life Sciences in Hoče, Faculty of Organizational Sciences in Kranj, Faculty of Logistics in Celje, Faculty of Tourism in Brežice, Faculty of Energy Technology in Krško and Faculty of Criminal Justice and Security in Ljubljana. Most of the university's faculties are based in Maribor, where the rectorate is also located. The University of Maribor Library and Student Dormitories are also members of the University of Maribor.

From its beginnings, the university developed through higher education institutions that later became faculties. The founding members of the University of Maribor were the College of Economics and Commerce Maribor, Technical College Maribor, College of Work Organization Kranj, Pedagogical Academy Maribor, Junior College of Law Maribor, Junior College of Agronomy Maribor, Academic and Study Library Maribor (Melanšek & Friš, 2025). This was followed by the gradual inclusion of other young faculties and the division of larger faculties into smaller ones (e.g., the Faculty of Education evolved into the Faculty of Arts and the Faculty of Natural Sciences and Mathematics; the Faculty of Energy Technology emerged from part of the Faculty of Electrical Engineering and Computer Science). As of 2025, the University of Maribor consists of the following 17 faculties: Faculty of Economics and Business (EPF UM), Faculty of Electrical Engineering and Computer Science (FERI UM), Faculty of Energy Technology (FE UM), Faculty of Civil Engineering, Transportation Engineering and Architecture (FGPA UM), Faculty of Chemistry and Chemical Engineering (FKKT UM), Faculty of Agriculture and Life Sciences (FKBV UM), Faculty of Logistics (FL UM), Faculty of Natural Sciences and

Mathematics (FNM UM), Faculty of Organizational Sciences (FOV UM), Faculty of Mechanical Engineering (FS UM), Faculty of Tourism (FT UM), Faculty of Criminal Justice and Security (FVV UM), Faculty of Health Sciences (FZV UM), Faculty of Arts (FF UM), Faculty of Medicine (MF UM), Faculty of Education (PEF UM) and Faculty of Law (PF UM) (Univerza v Mariboru, n.d.-i).

Since 2016, the University of Maribor has ranked among the top 4% of the most prestigious universities in the world. It is the only Slovenian university listed in the *Times Impact Rankings 2021*, and it is also ranked among the best young universities on the *Times Young University Rankings*. It has received several recognitions, including the HR Excellence in Research award, Recognition for the Well-Being of Foreign Students at Higher Education Institutions, Global Student Satisfaction Award, Apple of Quality (Sl. *jabolko kakovosti*) and the Athlete Friendly Education Certificate. The university also upholds ethics and integrity in its operations (Univerza v Mariboru, n.d.-b).

3 Educational Activity

Educational activity has been a fundamental mission of the university since its inception. Significant changes in higher education occurred with the Bologna reform of study programmes. The high ideals of the Bologna process in European higher education brought numerous transformations. The ideal university professor is envisioned as a teacher, an excellent researcher, a contributor to national policy in their field, and someone whose impact is also visible in the local community and within the university itself. Educational activities take place at the faculties, which offer students 178 study programmes (Sotlar & Frumen, 2025). In addition to formal study programmes, the university also provides lifelong learning opportunities. The University of Maribor is highly adaptable to the education of Erasmus+ students, who attend lectures in English. They are offered a wide range of subjects with a reduced scope. There are also numerous programmes available for international students pursuing regular studies and obtaining formal qualifications. The university also proudly hosts a doctoral school, which, in cooperation with the faculties, ensures the highest level of education and prepares personnel for work in science and research. The number of graduates who have successfully completed their

studies in one of the cycles is 147,800, including: 130,380 at the undergraduate level, 15,537 at the master's level, and 1,882 at the doctoral level.²

An important aspect related to studying is student accommodation in the Student Dormitories in Maribor, where living and study conditions are well provided (Univerza v Mariboru, Študentski domovi, n.d.). Ensuring the same quality of student accommodation at locations outside Maribor remains a greater challenge.

Particular attention should be given to the development of the Faculty of Medicine and the Faculty of Health Sciences, which are excellently adapting to the growing demand for healthcare professionals in Slovenia, especially during a time of staff shortages in the health sector. In addition to medical studies, new programmes in dental medicine and pharmacy represent a significant added value for the University of Maribor and the wider community. Other faculties are also actively adapting to labour market needs and projections of future demands for various educational profiles.

4 Research and Artistic Activity

Research activity at the University of Maribor is based on four fundamental pillars, namely stable funding of scientific research, national research projects, European and international projects as well as research groups and individual researchers (Univerza v Mariboru, n.d.-f). Stable funding is ensured through four pillars: institutional funding pillar, programme funding pillar, development funding pillar and national research programmes. The University of Maribor covers a wide range of scientific fields, including: Mathematics, Fundamental Constituents of Matter, Condensed Matter Physics, Physical and Analytical Chemical Sciences, Synthetic Chemistry and Materials, Computer Science and Informatics, Systems and Communication Engineering, Products and Processes Engineering, Universe Sciences, Earth System Science, Materials Engineering, Molecules of Life: Biological Mechanisms, Structures and Functions, Integrative Biology: from Genes and Genomes to Systems, Cell Biology, Development, Stem Cells and Regeneration, Physiology in Health, Disease and Ageing, Neuroscience and Disorders of the Nervous System, Immunity, Infection and Immunotherapy, Prevention, Diagnosis and Treatment of Human Diseases, Environmental Biology, Ecology and Evolution,

² Special thanks for the data go to Sebastijan Frumen from the Rectorate of the University of Maribor.

Biotechnology and Biosystems Engineering, Individuals, Markets and Organisations, Institutions, Governance and Legal Systems, The Social World and Its Interactions, The Human Mind and Its Complexity, Cultures and Cultural Production, The Study of the Human Past, Human Mobility, Environment, and Space (Univerza v Mariboru, n.d.-h).

In 2024, the university hosted 51 programme groups with 111 early-stage researchers. The University of Maribor is implementing 92 basic research projects, 13 applied research projects, 6 postdoctoral research projects and 40 projects of the targeted research programme. The university participates in 126 international research and development projects, including those co-financed by European structural funds. In total, research is carried out within 111 research groups. There were 361 projects involving industry or other knowledge users. Support for research activities is provided by the Department for Research and Arts at the University of Maribor (Univerza v Mariboru, n.d.-e). The university is part of the open science movement (Univerza v Mariboru, n.d.-g), making scientific achievements accessible to a broader audience.

The University of Maribor Library provides essential support through electronic access to national and international publications (Univerza v Mariboru, Univerzitetna knjižnica Maribor, n.d.). The Institute of Information Science monitors researchers' achievements (SICRIS, Informacijski sistem o raziskovalni dejavnosti v Sloveniji, n.d.; IZUM, Institut informacijskih znanosti, Maribor, n.d.) and ranks them by discipline for calls issued by the Slovenian Research and Innovation Agency (Javna agencija za znanstvenoraziskovalno in inovacijsko dejavnost Republike Slovenije [ARIS], n.d.) and other research funders.

At the faculty level, the following research areas stand out: Production Technologies and Systems (FS UM), Computer Science and Informatics (FERI UM), Civil Engineering and Transportation (FGPA UM), Chemistry and Chemical Engineering (FKKT UM), Biology, Mathematics, Physics, Education (FNM UM), Administrative and Organizational Sciences (FL UM), Energy and Electrical Devices (FE UM), Economics (EPF UM), Linguistics (FF UM), Education (PEF UM), Administrative and Organizational Sciences (FOV UM), Law (PF UM), Criminology and Social Work, Administrative and Organizational Sciences (FVV UM), Economics (FT UM), Microbiology and Immunology, Metabolic and Hormonal Disorders, Biochemistry and Molecular Biochemistry (MF UM), Plant Production and

Processing (FKBV UM), Public Health (Safety at Work) (FZV UM). The university also excels in the arts, particularly in music and visual arts (Korošak et al., 2025).

Educators and researchers at the University of Maribor have received numerous national awards for scientific research. Most notably, the Zois Award and Zois Recognition, the highest national honours for achievements in scientific research and development. The Zois Award is presented for lifetime achievement to researchers who have made exceptional contributions to scientific research and development, as well as for outstanding accomplishments in scientific research and development.³

Recipients of the Zois Award for Lifetime Achievement include: *Željko Knez* in the field of Chemical Engineering (2024), *Joso Vukman* in the field of mathematics (2023), and *Zinka (Terezija) Zorko* for research on the dialects of Carinthia, Styria, and the Pannonian dialect group at the phonological, morphological, syntactic, and lexical levels (2013). Other Zois Award recipients include: *Matjaž Perc* for outstanding scientific achievements in the field of complex systems physics (2018), *Zdravko Kravanja* for outstanding achievements in the development of computer-aided methods and tools for process synthesis and reconstruction (2017), *Gorazd Meško* for outstanding achievements in ecological criminology (2014), *Matjaž Klemenčič* and *Vladimir Klemenčič* (University of Ljubljana) for outstanding scientific and development achievements for the book *Die Kärntner Slowenen und die Zweite Republik: zwischen Assimilierungsdruck und dem Einsatz für die Umsetzung der Minderheitenrechte*, Mohorjeva družba/Hermagoras, 2010 (2011), *Miha Drofenik* for outstanding research achievements in the field of materials (2010), *Marko Jesenšek* for outstanding achievements in the field of the Slovenian language (2009), *Sandi Klavžar* for outstanding scientific and development achievements in mathematics (2007), *Željko Knez* for outstanding scientific and development achievements in technical chemistry (2006), *Leopold Škerget* for outstanding scientific achievements in process and environmental engineering (2001), and *Marko Robnik* for outstanding achievements in the field of physics (1997).

³ Special thanks for the list of award recipients go to Lidija Gregorec from the Rectorate of the University of Maribor.

Recipients of the Zois Recognition from the University of Maribor are: *Uroš Potočnik* for significant achievements in genome research for personalized medicine (2024), *Irena Stramljič Breznik* for significant achievements in scientific research and the development of innovative approaches in linguistics (2023), *Matjaž Finšgar* for significant achievements in the development of unconventional tools in analytical chemistry (2023), *Lidija Čuček* for significant achievements in process systems engineering (2022), *Nataša Vanpotoič* for research in modelling structures and resonant responses of multidimensional thermotropic phases (2021), *Samo Kralj* for significant scientific research achievements in soft matter physics (2020), *Boštjan Brešar* for significant achievements in graph theory (2019), *Maja Rupnik* for significant scientific achievements in microbiology (2014), *Mojca Škerget* for significant scientific and development achievements in chemical engineering (2012), *Boštjan Golob*, *Samo Korpar*, and *Marko Starič* (University of Ljubljana) for significant achievements in experimental particle physics (2012), *Valerij Romanovskij* for significant scientific achievements in mathematics (2011), *Matjaž Perc* for significant achievements in theoretical physics (2009), *Jože Bališ* for significant achievements in production technologies and systems (2007), *Matjaž Valant* for significant scientific achievements in materials science (2003), *Borut Zalar* for significant scientific achievements in mathematics (2001), *Andrej Polajnar*, *Erich Štefanec*, *Zlatko Vežjak*, and *Slavko Mlinarič* for inventions and technological achievements in the development of anti-burglary systems and safes (2001), *Sandi Klavžar* for significant scientific achievements in mathematics in the field of graph theory (2000), *Božidar Krajncič* for significant scientific achievements in the physiology of flowering (1999), and *Željko Knez* for significant scientific achievements in the improvement of sub- and supercritical fluid extraction processes (1998).

Since 2005, the Republic of Slovenia has been awarding Puh recognitions, and since 2018, also Puh awards, granted to individuals who have made significant contributions through inventions, technological and non-technological development achievements, and the application of scientific findings from all fields in introducing innovations into economic and social practice. The Puh Recognition in 2020 was awarded to *Daroko Goričanec* for his innovative technology that increases the efficiency of primary fuel for high-temperature heating purposes.

The National Awards of the Republic of Slovenia for Scientific Research Work were the highest state awards for scientific research and were presented from 1992 to 1996/97. The 1995 National Award was given to *Andrej Žnidaršič*, *Marjeta Limpel*, and

Miha Drofenik for the invention of a chemical composition and the technological and production process for preparing high-power Mn-Zn ferrites, usable in the frequency range from 16 kHz to 1 MHz. The 1993 National Award was awarded to *Jera Vodušek Starič* for outstanding achievements in the field of history.

From 1957 to 1991, the Kidrič Award was the highest Slovenian recognition for scientific achievements. Recipients of the Boris Kidrič Fund Awards include: *Mirko Križman* for his work *Jezik kot socialni in nacionalni pojav – primerjalno z jezičkovnimi odnosi v Radgonskem kotu* (1991), *Joso Vukman* for contributions in functional analysis (1990), *Vladislav Rajkovič* and *Marko Bohanc* for achievements in computer-aided decision-making using artificial intelligence methods (1990), *Jožef Mlinarič* for his work *Kostanjeviška opatija 1234–1786* (1988), *Savo Spaič*, *Alojz Križman*, and *Anton Klemenčič* for research and development of low-alloy copper alloys (1985), *Vladimir Bračič* for significant research achievements in geography (1984), *Miha Drofenik* for work on the synthesis and characterization of magnetic phases based on Fe_2O_3 and semiconducting ceramics based on BaTiO_3 (1983), *Borut Belec* for studies on the geographical characteristics of vineyard, orchard, and hop field development in Slovenia (1982), *Andro Alujevič* and *Leopold Škerget* for work on methods of simultaneous analysis of temperature and stress in fuel elements and reactor pressure vessels (1981).

The Invention and Improvement Award for 1990 was awarded to *Vojko Ozim* for the invention of a hydrokinetic process for iron removal from water using oxygen.

Employees of the University of Maribor have also received awards in the field of arts. The Prešeren Awards and Prešeren Fund Awards are the highest recognitions of the Republic of Slovenia for achievements in the arts. The Prešeren Award is given to artists who have, through outstanding artistic achievements over their lifetime, made a lasting contribution to Slovenia's cultural heritage. The Prešeren Fund Award is presented to artists for exceptional artistic achievements made public in the past three years, enriching Slovenia's cultural treasury. The Prešeren Fund Award in 2004 was awarded to *Oto Rimele* for his exhibition *Illuminations*.

Educators and researchers of the University of Maribor are also members of the Slovenian Academy of Sciences and Arts (Slovenska akademija znanosti in umetnosti (SAZU), n.d.). Active members of SAZU are *academician Marko Jesenšek*, PhD in Linguistic Sciences, Full Professor at the Department of Slavic Languages

and Literatures, Faculty of Arts, University of Maribor. He became an associate member on June 1, 2017, a full member on June 1, 2023, and has served as Secretary of the Class for Philological and Literary Sciences since October 1, 2021, as well as *academician Željko Knez*, Full Professor of Chemical Engineering at the Faculty of Chemistry and Chemical Engineering, University of Maribor. He became an associate member on June 1, 2017, and a full member on June 1, 2023. Deceased members of SAZU include *academician Jože Mlinarič* (born 1935, died 2021), Full Professor of the History of Feudalism and Auxiliary Historical Sciences at the Faculty of Education, University of Maribor, and its Professor Emeritus. He became an associate member of SAZU on June 6, 1995, and a full member on June 7, 2001, as well as *academician Zinka Zorko* (born 1936, died 2019), PhD, Full Professor of the History and Dialectology of the Slovenian Language at the Faculty of Education, University of Maribor, and its Professor Emerita. She became an associate member of SAZU on June 12, 2003, and a full member on May 21, 2009.

The Republic of Slovenia has been awarding national prizes in education since 1966. These are the highest state awards granted for outstanding achievements that significantly contribute to the development of pedagogical practice and theory, promote quality education, strengthen the protection of human rights and fundamental freedoms in education, enable positive educational influences of schools, and encourage the humanization of relationships within schools. Lifetime achievement awards in higher education were received by *Martin Kramar* (2006), *Peter Glavič* (2010), *Ivan Gerlič* (2014), *Boris Aberšek* (2019) and *Jurka Lepičnik Vodopivec* (2020). *Majda Schmidt Krajnc* received the award for outstanding achievements in higher education (2017).

The Honorary Badge of Freedom of the Republic of Slovenia was awarded to *Majda Slajmer Japelj* (1996) and *Milan Ževart* (2002). The Silver Badge of Freedom of Slovenia was awarded to *Tine Lab* (1999) and *Ivan Vanek Šiftar* (1999). The Honorary Badge of Freedom of the Republic of Slovenia was also awarded to *Jože Florjančič* (2000) and *Božidar Krajncič*. Recipients of the Golden Order for Merits of the Republic of Slovenia include *Zora Janžekovič* (2004) and *Ludvik Toplak* (2022). The Order for Merits was awarded to *Zmago Turk* (2006), and the Medal for Merits was awarded to *Ivan Kranjc* (2014). Researchers from the University of Maribor have also received numerous international awards and recognitions.

5 Quality and Sustainable Development

International ranking systems, based on publicly available methodologies, produce quantitative assessments of the quality of study programmes, activities, institutions, or national higher education systems. These rankings measure and compare academic achievements using quantitative indicators, thereby promoting academic excellence. Rankings have become established in the international higher education area as a source of information and a tool for monitoring quality (Univerza v Mariboru, n.d.-b).

The University of Maribor places the principles of social responsibility and sustainable development at the forefront of its activities. The strategy of the University of Maribor pursues an inclusive, innovative and integrated higher education area that will train active, critically-thinking and responsible citizens, guarantee the quality of education and research, academic integrity, and cultivate concern for sustainable development of society. The University of Maribor strives for sustainable, socially responsible and high-quality development of sciences and arts, research fields and sub-fields, while considering the smart specialization principles, with emphasis on tackling societal challenges. The University of Maribor is the highest-rated Slovenian university on the *Times Impact Rankings*, which assess how universities incorporate and promote sustainable development goals in their work. The University of Maribor is monitoring and introducing an increasing number of sustainable development objectives in its operation. This year, it participated in the rankings with eleven sustainable development objectives. The field of quality also includes courses and trainings for employees, evaluations of work across different fields, and student surveys. The university is also inclusive toward students with special needs, adapting the educational process and making infrastructure modifications to buildings to ensure easier access and use of facilities (Univerza v Mariboru, n.d.-a).

Efforts toward sustainable development at the university take place in two ways, namely by integrating green and other sustainability-related content into education and research, and through the university's social engagement in promoting the sustainable development of society as a whole (Vovk et al., 2025).

The university's reputation and connections with other institutions, organizations, and civil society are reflected in numerous results across various fields of activity and in the integration of knowledge into efforts to improve quality of life, understand social and natural phenomena, and contribute to the development of technologies and processes. Awards and recognitions, from university-level to national and international, as well as memberships in national scientific associations and international academies of sciences and arts, testify to the development of individuals and of the university as a whole. The contribution of individuals who have received high national and international awards and recognitions to the university's reputation is significant.

6 International Cooperation and Internationalization

International cooperation is essential for the development of the university. Collaboration with leading institutions fosters progress, the adaptation of practices, and the acquisition of new knowledge. The requirement of a three-month teaching or research stay abroad for appointing higher education teachers and staff to academic titles is of great importance, especially when the individual chooses to spend time at a university that is a leading one in a particular field. Such cooperation enables mutual understanding, and if it results in the development of a course, publication of a scientific article, or preparation of a new project, it is highly beneficial. Visits from colleagues from other universities to Maribor are also valuable for both sides. Moreover, the involvement of students in international exchanges, not only in education but also in student research, participation in international conferences, or summer (doctoral) schools, is an exceptional experience for young people (Univerza v Mariboru, n.d.-d). The number of University of Maribor cooperation agreements with universities worldwide, agreements that are more than just words on paper, reached 650 by 2025.⁴

In addition to established international cooperation programmes and the ATHENA European University Alliance, teaching, student, and other exchanges within the Erasmus+ programme, and the organization of summer schools, other programmes are also important for strengthening researcher connections (e.g., Swiss National Science Foundation and the Fulbright Programme), which enhance the quality of work and integrate University of Maribor staff into European and international

⁴ Special thanks for the data go to Uroš Kline from the Rectorate of the University of Maribor.

scientific circles, associations, and project and development groups (Swiss National Science Foundation, n.d.; U.S. Embassy in Slovenia, n.d.; Univerza v Mariboru, n.d.-d). International cooperation can be linked to research work, followed by teaching, student exchanges, and recently also international cooperation and exchanges of administrative and support staff at the University of Maribor. Through various activities, including conferences, the University of Maribor has established its presence on the global scientific map.

7 Social Engagement and Media Presence

Thinkers and social critics within the academic environment of the University of Maribor are important observers and evaluators of social developments. They comment on current events and represent the university in the media, especially on television, radio, and in daily newspapers. Media contributions significantly influence the presentation of university work, commentary on social developments, and public awareness of specific topics. In the age of information technology and the modern information society, this area is strongly influenced by the internet and open science. University representatives are indispensable members of working groups preparing legislation (not only in higher education and research) and national programmes across various sectors of social life (e.g., social, health, agricultural, migration, security, and criminal justice policies). The university informs the public about major events on its official website (Univerza v Mariboru, n.d.-c).

8 University Governance and Management

Governance and management are key aspects of university operations, especially as it faces increasing challenges, particularly in the specialization of certain administrative tasks. Professional services at the Rectorate, faculties, and the University of Maribor Library play a vital role. Highly qualified staff who support pedagogical and research activities are extremely important. Human resource care at the University of Maribor is especially crucial, as sustainable development can only be ensured by top-level staff dedicated to their mission. Without competent and committed personnel, there can be no pedagogical, research, artistic, or development work. This is a prerequisite for establishing a high-quality educational and research system, offering students quality knowledge, and ensuring competitiveness in the labour market. The university is committed to the professional development of all staff, respects ethical and professional standards, ensures good employment

conditions, provides appropriate working environments, and implements training and quality development across all fields. This commitment to quality is a hallmark of the University of Maribor in most fields, because without quality, there is no progress. Monitoring and implementing human resource policies with efforts to attract and retain the best staff is essential for current tasks and the future development of the university.

The university leadership also promotes staff education and training. The beginnings of systematically organized training for employees date back to 2014, when the goal was to establish a Centre for Career and Staff Development, aimed at offering workshops accessible to all employees to identify and enhance key competences for their work. Based on information obtained from examples of best practices from partner universities and the results of a survey on the necessary knowledge and competences of employees, the University of Maribor developed its first comprehensive education and training programme for employees in 2015. Development in this field has been intensive, and by 2025, the university offers a wide range of trainings and educational courses, delivered by domestic experts and renowned professionals from Slovenia and abroad with rich experience and expertise. Additional education and training is also available to students and early-stage researchers.

The University of Maribor proudly hosts the Centre for Professors Emeriti and Retired Higher Education Teachers (Univerza v Mariboru, n.d.). The Centre's purpose is to encourage and support intellectual and social engagement among members through planned activities (e.g., meetings, lectures, workshops, excursions, interest groups), support academic work of members who continue their scholarly activities, ensure members receive recognition, benefits, and attention appropriate to their long-standing contributions to the university, maintain close cooperation between members and the university, collaborate with the university to leverage intellectual and academic resources of its members, raise awareness of past, present, and potential future contributions of members to the university and the local, national, and global community, seek and utilize additional avenues to serve and engage members. A key role of the Centre is also to promote intergenerational cooperation.

The university has established the University of Maribor Press, which publishes monographs, anthologies, journals, textbooks, and other publications important for the educational and research process, and for promoting the university in the broader environment. From September 2016 to spring 2025, the Press has published 782 different monographic publications. It publishes 16 professional and scientific journals and is actively working toward indexing in Scopus (Univerzitetna založba Univerze v Mariboru, n.d.).

The University of Maribor is positively recognized for student involvement in decision-making processes and evaluation of the pedagogical process. Very early in the university's development, they became members of its bodies – the Senate, Committees, Boards, etc. It is also important to note that many graduates from various fields, after completing undergraduate and postgraduate studies, form part of the university's development core.

9 Final Reflections and Acknowledgements

The University of Maribor is present throughout the city, in the city centre, on its outskirts, and in various districts. This is why Maribor is a university city: a city full of young people who enliven the urban centre and the city as a whole, breathing life and youth into it. The same applies to locations where students study at faculties based outside Maribor. Over its fifty-year development, the University of Maribor has become a globally recognized, ambitious, sustainably oriented, open, and evolving higher education and research institution. It possesses all the qualities of an institution that is aware of its past and present and is focused on the future. The university proudly boasts excellent students and distinguished graduates in all cycles of study. It is well integrated into Slovenian society and continues to strengthen its social role. It therefore invests in the development of staff and appropriate working conditions for pedagogical staff, researchers, and all other employees.

Without the professional services and dedicated staff of the rectorate, faculties, libraries, and student dormitories, the university's development would not have been possible. The university is a complex system, and its quality depends on all segments of that system. Behind many of the highlighted achievements are the efforts of professional staff, who create the foundation for quality education, research, artistic work, student learning, and academic teaching.

While preparing such an important publication and writing this foreword, many feelings and memories arise. Although the faculty where I have worked since 1992 has undergone several transformations and became a full member of the University of Maribor only in autumn 2003, we are among the younger members of the university, yet certainly among the very active ones. During this time, I have experienced many levels of university life: from higher education teacher to Head of the Department of Criminology, Vice-Dean for Research, Dean, President of the Management Board of the University of Maribor, member of faculty and university Committees, and member of the faculty and university Senates. Of all these roles, working with students is the most important – they are our future. Research activity is also vital, as it motivates us researchers to strive for higher quality, allowing us to express our scientific curiosity, creativity, and search for new knowledge. This wonderful world of discovering truths and laws is complex during the research process, but often quite simple in the end. University members are very diverse, and it is difficult to place social sciences, humanities, engineering, natural sciences, and arts under a single umbrella. What matters is that, in addition to pedagogical work with students, we contribute to science, critical social thought, and art, not only nationally but also globally. In doing so, we must uphold humanistic values and the social responsibility of the university.

Fifty years is both a lot and a little. I recall a conversation during a visit about ten years ago to Pembroke College, University of Cambridge in the UK. One professor asked me whether the university I came from was old. I replied that it was about forty years old. That it is quite old. He smiled and said that it's probably very young. It depends on perspective and comparison.

The youth of our university is actually an advantage. Despite its youth, the university's staff and students achieve excellent results, some of which have global impact. From something small, something great can grow, and fifty years is a beautiful age that allows for much. As highlighted in the final chapter on the university's development, even very old universities face similar challenges as do younger ones. The age of a university is not the most important factor. What matters are funding, quality of staff, quality of study programmes, research achievements, and the university's impact on social life, critical thinking, and its integration into various societal activities – international, national, regional, and local. International cooperation, learning from the best, collaborating with the best, and transferring knowledge into our social environment are especially important. Everyone working

in academic environments faces similar challenges. Nevertheless, we can look to the future with optimism, as the university has promising staff to maintain its position in higher education and research. Let me mention education for shortage professions, such as the lack of doctors and dentists, and other areas where the university can fill gaps, however, not overnight. The only constant in society is continuous change, which we must adapt to and seek optimal solutions. The University of Maribor is committed to achieving high goals in this area, and I dare say there is no fear of running out of work or new research challenges.

A brief overview of the chapters in this monograph opens many perspectives of the university's development, and I would highlight the following: Efforts before, during, and after the establishment of the University of Maribor laid the foundation for future development (Melanšek & Friš, 2025). Awareness of the university's needs, the difficult path taken, legal foundations, and political support in the 1970s played a crucial role (Ivanjko et al., 2025). Lobnik and Gabrijelčič (2025) emphasize that the university must have premises that are integrated into the broader environment and enable functionality for education, research, artistic work, and other activities. These spaces must be aesthetic and reflect the university's stature. Besides functionality, the appearance and safety of premises and buildings are also important. The authors (Lobnik & Gabrijelčič, 2025) present past construction and renovation efforts and the challenges of building new faculty facilities. The Rectorate, the university's centre, is housed in a beautiful building from 1886, which gives the whole university its charm (Univerza v Mariboru, n.d.-i). Žnidaršič et al. (2025) present the characteristics of university staff and future challenges in human resource policy, highlighting the importance of a staff-friendly working environment. There are many future challenges in HR, especially in maintaining the quality and visibility of the university, which depend on staff quality, employees' qualifications for work, employees' competences and their ability to learn and adapt to new conditions, and high ethical standards. In 2022, the Resolution on the National Higher Education Programme until 2030 ("Resolucija o nacionalnem programu visokega šolstva do 2030 (ReNPVŠ30)", 2022) was adopted, which foresees two key measures in HR: promoting an internationally open HR policy and strengthening the systemic HR capacity of higher education institutions, as well as ensuring attractive research conditions, which the University of Maribor is also committed to (Žnidaršič et al., 2025). Sotlar and Frumen (2025) guide us through the wide range of faculty programmes and educational activities at the University of Maribor, as education is the core activity of every university. The fields of education

at the University of Maribor include social sciences, journalism and information science; business and administrative sciences, law; information and communication technologies (ICT); engineering, manufacturing and construction; natural sciences, mathematics and statistics; agriculture, forestry, fishery and veterinary medicine; transport, security, hospitality and tourism, personal services; health and social security; arts and humanities. Science and art are key areas developed by the university. Korošak et al. (2025) present the most active research fields at individual faculties of the University of Maribor, as well as the arts – visual and musical, which distinguish our university. Hrast et al. (2025) emphasize that, in addition to staff, students are the most important, as they are the largest group and the primary focus of education. Some students remain at the university after graduation and become part of its core workforce in education, research, administration, or logistics. The University of Maribor is known for the active role of students in many decision-making processes at both faculty and university levels. Tominc et al. (2025) highlight the importance of international cooperation among university staff and students, which is crucial for positioning the university in the international arena, collaborating on joint educational programmes (e.g., doctoral schools), research, and development projects. International cooperation also includes participation of researchers in editorial boards of international publications and collections, editorial work in international scientific journals, co-organization of international conferences, and other forms of collaboration with foreign universities. The sustainable development of the university aligns with the goals of sustainable development of society as a whole. The university's contribution in this area can be significant. If we summarize the United Nations Sustainable Development Goals, we can find reasons for the university's active role in education and research in each field. These goals include ending poverty and hunger, ensuring health, healthcare and well-being, quality education, gender equality, clean water and sanitation, affordable and clean energy, decent work and economic growth, industry, innovation and infrastructure, reducing inequalities, sustainable cities and communities, responsible consumption and production, climate action, life below water, life on land, peace, justice and strong institutions, partnerships for the goals. They also emphasize the importance of responding to security threats and ensuring quality of life (Vovk et al., 2025). Vovk et al. (2025) specifically highlight areas where the University of Maribor has achieved notable results in promoting sustainable development. Kačič et al. (2025) stress the importance of European integration, micro-credentials, digitalization, and the green transition – all pointing to a future-oriented development of the University of Maribor. The authors identify key topics for the university's future development

within the European higher education area, including awareness of globalization and the international dimensions of higher education, continuation of the Bologna Process, adaptation to new needs and conditions in Europe, such as employment trends and emerging professions. Ambitious goals follow, such as achieving 20% student mobility within Europe, creating a university without walls to address modern challenges like climate change and ecological issues. It is essential to establish European university alliances, to adopt appropriate national legislation, and to implement the Strategy of the University of Maribor 2021–2030. Let us not forget that a university must be strong, autonomous, and responsible, with strong leadership and sufficient autonomy to fulfil its mission effectively. It must be accountable to the society it serves, while respecting academic freedom and high ethical standards.

The following ten chapters present an exceptionally wide range of activities by the University of Maribor's staff and students. I recommend this book to anyone interested in the development of our university. Above all, I believe that every employee at the University of Maribor should read it to gain insight into its development over the past fifty years, its current position, and possible future directions, because the university is made up of people, from the first to the last employee.

The editors and authors have invested great effort in a short time to prepare this publication in honour of the 50th anniversary of our university, celebrated on September 18, 2025, where we work and fulfil our fundamental mission. Working with young people, research, and artistic activity, as well as contributing to society, is a privilege and a mission of the academic community.

This monograph should inspire colleagues to reflect on writing the history of individual faculties (some have already done so), going beyond brochures to produce precise and critical analyses and syntheses of their work. We should also consider monographs by specific areas of university activity, as this publication cannot encompass all the colleagues' work over the past fifty years. The editors, editorial board, authors, reviewers, proofreaders, and technical editors have done their best, and after about six months of intensive work, we present this comprehensive publication.

Reflecting on editorial work does not end when the task is completed; the thought process continues long afterwards. This was especially true in our case, as we completed the book in just over six months, coordinating 55 authors and editors. Work began in autumn 2024, and the manuscript was submitted to the publisher in June 2025. My reflections are framed on three levels of university functioning: societal, institutional, and individual. Universities play an important societal role by educating people at the highest level and fostering research and artistic creation. Their contribution is measured in many ways — scientific impact, student satisfaction, critical engagement, and stakeholder collaboration. Institutionally, universities are characterised by relative autonomy: while bound by national regulations, they also set their own rules and exercise self-governance. Individually, universities bring together diverse people whose unique perspectives enrich teaching, research, and artistic work.

Any reflection on universities must consider the sociology of science, particularly Robert K. Merton's work (1973/1942). His scientific norms — universalism, the sharing of knowledge, disinterestedness, organised scepticism, and intellectual integrity — remain foundational. His broader concepts, such as unintended consequences, reference groups, and the self-fulfilling prophecy, are equally relevant to understanding academic life. Universities, faculties, departments, institutes, and individuals differ greatly in size and contribution. Today, academic work is strongly shaped by state-driven bibliometrics and international rankings. This brings dilemmas, frustrations, and also creativity. I have been at the University of Maribor for 21 years and deeply respect the pioneers who built the institution. I have also worked outside the university and visited some of the world's leading institutions. Comparison is natural; my conclusion is that the University of Maribor is a good university with many opportunities for further development. Like in sports, our "bench" is short — excellence is scarce — yet the creativity and dedication of many colleagues remain a great strength. For many of us, academic work is not only a job but also a passion. Fifty years is a long time for an individual, but only the beginning for a university. The university does not exist outside society; science must include values, particularly because we bear responsibility for educating young people who shape the future. This is our most important and noble mission.

In closing, I thank everyone for their work, their critique, and the years they have dedicated to the University of Maribor. To those working at the university now and in the future, I wish much success. Working at a university is a privilege: engaging with young people and conducting research keeps us curious, lively, and continually seeking the new. The years pass, but the memories remain. Finally, regarding our book: spoken words fade, but written text endures. It offers reflection, opportunities for improvement,

and a foundation for future publications. Our book on 50 years of the University of Maribor is only the beginning — an invitation for others to share their stories and fill the gaps we could not address.

I thank the chapter authors for their exceptional contributions in documenting the development of the University of Maribor. Special thanks go to colleagues who supported the creation of this publication, especially the most active member of the editorial board, Secretary General of the University of Maribor, Mojca Tancer Verboten, for excellent communication. Gratitude also to editorial board members Šime Ivanjko, Alja Lipavac Oštir, Dušanka Mičetić Turk, Marko Marhl, and Zorka Novak Pintarič; proofreader Kornelija Sorger; reviewers Rado Bohinc, Stane Pejovnik, and Peter Umek; technical reviewer Barbara Erjavec – thank you all. A special thank you for the exceptional collaboration and effort goes to co-editor Natalija Ulčnik. Thanks also to Rector Zdravko Kačič for all the support and for the opportunity to serve as chief editor of such an important publication, which I consider a great honour. To all employees and students, I wish a joyful celebration of the 50th anniversary and continued success in the future. Thank you all – and long live and thrive our *alma mater* – the University of Maribor.

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THE CREATION OF FOUNDATIONS, BEGINNINGS AND EARLY DEVELOPMENT OF THE UNIVERSITY OF MARIBOR

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The development of higher education in Maribor was closely tied to educational reforms in Slovenia and Yugoslavia, as well as to the economic and social needs of northeastern Slovenia after the Second World War. Between 1959 and 1961, the first higher education institutions were established in Maribor, including schools of commerce, engineering, agronomy, law, dentistry, and the Pedagogical Academy. In 1961, the Association of Higher Education Institutions in Maribor was also founded, representing a significant step toward the institutional integration of the higher education landscape. In the early 1970s, with support from both local and republic authorities, intensive preparations for the establishment of a university began. The self-management agreement to merge into the University of Maribor was signed on June 12, 1975, and confirmed by the Assembly of the Socialist Republic of Slovenia on July 2, 1975. This officially marked the founding of the University of Maribor, with Vladimir Bračič serving as its first rector.

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1 The Establishment of the First Higher Education Institutions in Maribor

In the early 1950s, the communist authorities began implementing a comprehensive education reform, which also encompassed the field of higher education. At that time, the University of Ljubljana was the only university operating in Slovenia. During the reform of higher education, it faced numerous challenges, including the restructuring of study programmes, the introduction of new statutes, and disagreement of university professors. A central issue of the reform was the relationship between future higher education institutions and faculties, as this required a tiered study system and an inversion of the curriculum. This meant that practical subjects would be taught in the earlier years of study, while theoretical subjects would be reserved for the later years. Such a structure would make studies at higher education institutions comparable to the first cycle of university-level education (Gabrič, 2006; “Priporočilo o nadaljnji reformi visokošolskega študija na fakultetah Univerze v Ljubljani”, 1959). Students who successfully completed their education at one of the higher education institutions would have the opportunity to continue their studies at a comparable faculty in Ljubljana.

By the late 1950s and early 1960s, a trend of establishing higher education institutions emerged across Yugoslavia (e.g., in Niš, Priština, Split). This phenomenon can be attributed to the federal government's efforts to ensure a rapid influx of educated professionals (Bračič, 1984). In Slovenia, Maribor emerged as a promising new centre for higher education, being one of the largest and most important industrial hubs in the country. A key condition for the city's further economic development was the availability of qualified professionals, which Maribor lacked due to an insufficient number of graduates from the University of Ljubljana.

Already in 1947, Maribor residents advocated for the planned Faculty of Agriculture and Forestry to be established in their city. Maribor had a tradition of agricultural education, and the largest concentration of agricultural land and the social agricultural sector was located in northeastern Slovenia, justifying the placement of the new faculty in this region. However, the proposal was not accepted. Similarly, in 1955, when discussions were held in Ljubljana about establishing an independent faculty or department for textiles, Maribor again expressed interest in hosting the institution, but was once more unsuccessful (Bračič, 2000).

Initiatives to establish higher education institutions in Maribor became increasingly pronounced, however, not all members of the University of Ljubljana were enthusiastic about the idea of forming a new higher education centre. Some professors in Ljubljana were concerned that the establishment of higher education institutions and their potential connection to Ljubljana faculties would lower the quality of study (Gabrič, 2006). It is important to note that not all university staff in Ljubljana opposed the establishment of a new centre. For example, Dolfe Vogelnik, Rector of the University of Ljubljana (1958–1961), stated in the journal *Naša sodobnost* in 1961 that the establishment of higher education institutions in Maribor represented a “spontaneous emergence of a new higher education nucleus as a necessary consequence of the economic and social role of Maribor and the Maribor basin” (Vogelnik, 1961, p. 164).

1.1 Establishment of the Junior College of Commerce

The Junior College of Commerce was the first to be established in Maribor. The Committee for Education and Culture of the Republic Assembly of the People's Republic of Slovenia discussed the draft law on its establishment at its 7th session on June 29, 1959. This session is particularly noteworthy because it included a debate on the possible location of the new school. Two cities were primarily considered: 1. Ljubljana, due to the anticipated close connection between the Junior College of Commerce and the Faculty of Economics, and 2. Maribor, which, according to Committee Chair Franc Perovšek, would “lose its provincial character” with the establishment of the school, thereby “narrowing the excessive gap between Maribor and Ljubljana, at least to some extent.” Despite some reservations from committee members, the Committee for Education and Culture issued a positive opinion on establishing the Junior College of Commerce in Maribor (Odbor za prosveto in kulturo Republiškega zbora Ljudske skupščine LRS, 1959b).

The Law on the Establishment of the Junior College of Commerce (“Zakon o ustanovitvi Višje komercialne šole”, 1959) was unanimously adopted at the 8th session of the Republic Assembly on July 2, 1959 (Obravnava in sklepanje o predlogu zakona o ustanovitvi Višje komercialne šole, 1959). However, the law that was published two weeks later, did not yet specify the location of the school (“Zakon o višji komercialni šoli”, 1959). Although the location was not formally determined, it was informally agreed that the school would operate in Maribor. Local authorities

in Maribor were informed of the expected location, allowing preparations to begin as early as July. In August, a preparatory committee was appointed to organize all necessary activities for the school's launch until the school board was elected (Bračić, 1984, pp. 36–37; Melanšek & Friš, 2023; Poročilo za 1. redno letno skupščino VKŠ Maribor, 1961). Although preparations were already underway, Maribor was officially confirmed as the school's seat only with the Decree on the Junior College of Commerce, published on September 17, 1959 (“Uredba o višji komercialni šoli”, 1959).



Figure 1: Ceremonial opening of the Junior College of Commerce in Maribor

Source: (Gostje in slušatelji na svečani otvoritvi VKŠ v Mariboru, 1960, p. 29)

The official opening of the Junior College of Commerce took place on October 23, 1959, in part of the building of the former Classical Gymnasium. The ceremony was attended by numerous prominent political and public figures, including Boris Kocjančič, member of the Executive Council of the PRS and Chair of the Council for Science and Culture, who officially opened the first higher education institution in Maribor. Regular lectures began three days later, initially in two departments: Foreign Trade and Industrial Economics. Soon after, two more departments were added: Accounting and Finance, and Banking (Bračić, 1960, 1984; Poročilo za 1.

redno letno skupščino VKŠ Maribor, 1961; Poročilo o delu šole v študijskem letu 1964–65 in 1965–66, 1965; Ustanavljanje višjih šol v Mariboru: dodatek k elaboratu, 1960).

The significance of the new school was also highlighted in the student newspaper *Tribuna* from Ljubljana:

“The importance of the new school lies not only in addressing the need for highly qualified personnel in the economy, but especially in the fact that it was established outside Ljubljana. This ends Ljubljana’s monopoly as the sole centre for educating highly qualified professionals. The school was established in an economic centre that has all the necessary conditions and perhaps the greatest need for such an institution. It also greatly facilitates access to education for children from working-class families.” (Višja komercialna šola v Mariboru odprta, 1959, p. 14)

In 1962, the school was renamed the Junior College of Economics and Commerce, to emphasize that it was not merely a narrowly focused vocational school but also bridged the gap between secondary and higher education in economics. For several years, the school aspired to switch to the second cycle and become a 4-year College. This goal was finally achieved on April 10, 1969, with the adoption of the Law on the College of Economics and Commerce in Maribor. The right to confer doctoral degrees was granted a few years later, at which point the school was fully equivalent to a faculty (Kerin, 1985; “Zakon o visoki ekonomsko-komercialni šoli v Mariboru”, 1969).

1.2 Establishment of the Junior Technical College

Just one month later, the republic authorities began reviewing final proposals for the establishment of the second Junior College in Maribor. It is important to emphasize that Maribor had long advocated for the establishment of a Junior Technical College. As MP Ludvik Gabrovšek noted, the demand for such a school in Maribor “surfaced with particular urgency once the Junior College of Commerce was established” (Odbor za prosveto in kulturo Republiškega zbora Ljudske skupščine LRS, 1959a). The draft law on the Junior Technical College was discussed at the 11th session of the Committee for Education and Culture on November 20, 1959, and at the 10th session of the Republic Assembly on November 26, 1959 (Obravnava in sklepanje

The District People's Committee of Maribor allocated premises for the Junior Technical College in the building of the Secondary Technical School. Interestingly, the school began regular lectures already in the spring semester, on March 1, 1960, although with a limited number of full-time students. The opening ceremony on March 5, 1960, was attended by Boris Kraigher, President of the Executive Council, who reportedly stated in his speech that the Junior College of Commerce and the Junior Technical College represented the beginnings of a future independent university in Maribor (Bračič, 1984; Gabrič, 2006).

Similar to the leadership of the Junior College of Economics and Commerce, the administration of the Junior Technical College also aimed to introduce second-cycle studies, particularly in mechanical engineering, due to a shortage of graduate engineers in Maribor and the broader region. The need for second-cycle mechanical engineering studies in Maribor was supported by industry representatives and the professional association of mechanical engineers and technicians. Preparations for the basic documentation began at the Junior Technical College already in spring 1970, but the entire process was delayed by three years. Eventually, the Law on the Technical College in Maribor was adopted on July 18, 1973, enabling second-cycle studies not only in mechanical engineering but also in other departments of the school (Kerin, 1985; "Zakon o Visoki tehniški šoli v Mariboru", 1973).

1.3 Maribor Becomes a New Centre for Higher Education: Establishment of the Junior College of Agronomy, Junior College of Dentistry, and Junior College of Law

The fact that Slovenian authorities recognized Maribor's potential as a new centre for higher education in Slovenia is evident in the establishment of five higher education institutions in "the city by the Drava River" within the span of one year. In addition to the previously mentioned Junior College of Commerce and Junior Technical College founded in 1959, three more institutions were established in the city in 1960, namely the Junior College of Agronomy, the Junior College of Dentistry, and the Junior College of Law. The Committee for Education and Culture of the Republic Assembly of the People's Republic of Slovenia discussed the establishment of these three schools at its 15th session on June 18, 1960 (Odbor za prosveto in kulturo Republiškega zbora Ljudske skupščine LRS, 1960). A few days later, on June 24, all three draft laws of the mentioned schools were reviewed and

adopted at the 14th session¹ of the Republic Assembly of the People's Republic of Slovenia (Obravnava in sklepanje o predlogu zakona o Višji agronomski šoli v Mariboru, 1960; Obravnava in sklepanje o predlogu zakona o Višji stomatološki šoli v Mariboru, 1960; Obravnava in sklepanje o predlogu zakona o Višji pravni šoli v Mariboru, 1960). The Law on the Junior College of Agronomy in Maribor (“Zakon o Višji agronomski šoli v Mariboru”, 1960), Law on the Junior College of Dentistry in Maribor (“Zakon o Višji stomatološki šoli v Mariboru”, 1960), and Law on the Junior College of Law in Maribor (“Zakon o Višji pravni šoli v Mariboru”, 1960) were published in the Official Gazette of the PRS (Sl. *Uradni list LR Slovenija*) on July 7.



Figure 3: Opening ceremony of the three new higher education institutions in Maribor

Source: (Fakulteta za kmetijstvo, 2005)

The Maribor newspaper *Večer* reported on the establishment of the new schools on June 25, 1960, stating:

“With the establishment of new higher education institutions, we are continuing the decentralization of higher, university-level education, which until now was concentrated in Ljubljana. We are organizing higher education institutions in

¹ The 14th session of the Republic Assembly took place on June 23–24, 1960, and also included proposals for the Junior College of Physical Education in Ljubljana and the Junior Maritime College in Piran.

locations the development and sufficient number of qualified professionals of which ensure a respectable professional level and direct connection with societal practice. This decentralization also enables greater inclusion of youth in higher education” (Tri nove višje šole v Mariboru, 1960, pp. 1–2).

The joint opening ceremony of the three new schools in Maribor was held on October 3, 1960, in the main hall of the Junior College of Agronomy. The event was attended by numerous prominent political and public figures (M. K., 1960; P. S., 1960). The keynote speaker was Ančka Kuhar, Vice President of the District People's Committee of Maribor (pictured in Figure 3), and the schools were officially opened by Boris Kraigher, President of the Executive Council of the Republic Assembly of the PRS. The ceremony was also covered in *Večer*, which emphasized Maribor's emerging role as “a new centre of higher education in Slovenia and, in the future, undoubtedly a new university centre of Slovenia.” (Maribor mora bistveno prispevati k razvoju višjih šol v Sloveniji, 1960).

Initially, the three newly established schools were housed in existing buildings of other institutions. The Junior College of Agronomy was located in the building of the Agricultural Secondary School, the Junior College of Law was housed in the former Classical Gymnasium (which at that time also hosted the Junior College of Commerce), the Junior College of Dentistry faced space challenges and operated across multiple buildings, with its administrative offices located at Sodna ulica 15 (Bračič, 1984, 1991).

Both the Junior College of Law and the Junior College of Agronomy retained their status as higher education institutions at the time of the self-management agreement establishing the University of Maribor. Meanwhile, the Junior College of Dentistry was gradually phased out by the Law on the Termination of the Junior College of Dentistry in Maribor, adopted on October 2, 1969 (“Zakon o prenehanju Višje stomatološke šole v Mariboru”, 1969).²

² The law stipulated that the school would cease operations on September 30, 1970, with students allowed to complete exams and colloquia until September 30, 1971.

1.4 Establishment of the Pedagogical Academy

The last institution to be established among the first higher education schools in Maribor was the Pedagogical Academy Maribor. The initiative to establish a Junior College for training primary school teachers in Maribor³ was first proposed between the two world wars, and again in 1947, when the Junior Pedagogical College was founded in Ljubljana. However, in both cases, the idea remained unrealized (Bračič, 1984; Gabrič, 2006). More serious efforts to establish the Pedagogical Academy in Maribor, led by several local educators, began between 1956 and 1958. The Council for Education and the District People's Committee included the establishment of the Pedagogical Academy in their development plan for the Maribor region between 1957 and 1961, envisioning it as the first higher education institution in the city (Dosežen razvoj in perspektive razvoja šolstva v okraju Maribor 1961–1965, n.d.). At the 7th regular session of the Council for Education of the District People's Committee Maribor, held on October 2, 1958, the establishment of the academy was planned for 1959 (Okrajni ljudski odbor Maribor, 1958).

Despite the desire and efforts to establish pedagogical studies in Maribor, these attempts were unsuccessful, by that time, five junior colleges had already been founded in the city. A breakthrough came when a subcommittee advocating for the establishment of a Junior Pedagogical College proposed encouraging students who had studied at the pedagogical school in Ljubljana but had not completed their studies to enrol and continue their studies in Maribor. They suggested establishing a Centre for Part-Time Studies of the Ljubljana Junior Pedagogical College in Maribor and selecting lecturers from among Maribor's secondary school teachers. Ljubljana approved the proposal, and by early 1961, part-time students began their studies at the higher education level in Maribor, under the Ljubljana school (Bračič, 1984; Melanšek & Friš, 2023; Odločba: Podkomisija za ustanovitev Višje pedagoške šole v Mariboru, 1960). At the end of October 1960, the newspaper *Večer* published an article titled: "V Mariboru tudi Višja pedagoška šola: januarja 1961 bo začel v Mariboru z delom samostojni oddelek Višje pedagoške šole v Ljubljani; za začetek samo pomoč izrednim slušateljem; v jeseni samostojna višja šola za vzgojo učiteljskega kadra za osnovne šole!" (Eng. *Junior Pedagogical College Also in Maribor: In*

³ Teacher education in Maribor had a long tradition. Its beginnings date back to 1802, when two candidates at the Maribor "Main School" took an exam after a three-month preparatory course, qualifying them as organists, sacristans, and teachers in public schools (Bračič, 1986).

January 1961, an Independent Department of the Ljubljana Junior Pedagogical College will Begin Operating in Maribor; initially only support for part-time students; in autumn, an independent junior college for training primary school teachers!) (V Mariboru tudi Višja pedagoška šola, 1960).

On June 22, 1961, at its 23rd session, the Committee for Education and Culture of the Republic Assembly of the People's Republic of Slovenia reviewed and adopted the draft law on the establishment of the Pedagogical Academy in Maribor. On the same day, the Committee for Government Organization and Administration issued a positive report, followed two days later by the Legislative Committee (Bračič, 1984; Gabrič, 2006; Priloge k predlogu zakona o ustanovitvi Pedagoške akademije v Mariboru, 1961; Odbor za prosveto in kulturo Republiškega zbora Ljudske skupščine LRS, 1961). The Republic Assembly of the People's Republic of Slovenia discussed the proposal on June 26, 1961 (Obravnava in sklepanje o predlogu zakona o ustanovitvi Pedagoške akademije v Mariboru, 1961). The Law on the Establishment of the Pedagogical Academy in Maribor (“Zakon o ustanovitvi Pedagoške akademije v Mariboru“, 1961) was unanimously adopted at that session and published three days later in the Official Gazette of the People's Republic of Slovenia.

This marked the establishment of the first college in Maribor, as all previously founded schools were only junior colleges. Notably, the Pedagogical Academy in Maribor was also the first pedagogical academy in Slovenia, since the Ljubljana Junior Pedagogical College was only transformed into an academy in 1964 (Bračič, 1984; Gabrič, 2006). The District People's Committee Maribor was responsible for providing premises for the new academy, initially allocating part of the building of the former Classical Gymnasium, which was already partially occupied by the Junior College of Law (Bračič, 1984, 1986).

Admission to the Pedagogical Academy in Maribor was open to graduates of all secondary schools, and even those who had not completed secondary school but had four years of relevant pedagogical experience (subject to a qualifying exam). Special aptitude tests were required for visual arts and music education programmes. The academy began its first academic year with 52 full-time and 204 part-time students, 164 of whom transferred from the aforementioned Centre for Part-Time

Studies of the Ljubljana Junior Pedagogical College in Maribor. Lectures for full-time students began on November 3, 1961 (Bračič, 1984; Melanšek & Friš, 2023).

In 1969, the Pedagogical Academy in Maribor suffered a setback due to the new Higher Education Act, which in Article 92 stipulated that the same provisions applied to the Pedagogical Academies in Ljubljana and Maribor as to junior colleges, effectively downgrading both academies to two-year junior colleges (Bračič, 1984, 1986; “Ukaz o razglasitvi zakona o visokem šolstvu”, 1969).

2 The Association of Higher Education Institutions in Maribor – Predecessor of the University of Maribor

Significant changes brought about by the emergence of new higher education institutions in Maribor were reflected in the adoption of a new law at the end of 1960: the Higher Education Act of the People's Republic of Slovenia, which replaced the University of Ljubljana Act (“Zakon o visokem šolstvu v Ljudski republiki Sloveniji”, 1960; “Zakon o Univerzi v Ljubljani”, 1957).

The newly adopted Act stated in its first article that at least three higher education institutions – faculties, colleges, art academies, and junior colleges – could be merged into an appropriate association (“Zakon o visokem šolstvu v Ljudski republiki Sloveniji”, 1960, p. 489). Based on this provision, the District People's Committee Maribor, together with five junior colleges in the city, proposed the establishment of the Association of Higher Education Institutions in Maribor in spring 1961. The Maribor junior colleges needed a coordinating body to harmonize their operations, address issues related to teaching staff, facilities, student welfare, and other shared concerns (Bračič, 1991; Gabrič, 2006; Poročilo za 2. volilno skupščino Združenja visokošolskih zavodov v Mariboru, 1965).

On May 23, 1961, the Republic Assembly of the People's Republic of Slovenia adopted the Law on the Establishment of the Association of Higher Education Institutions in Maribor (Obravnava in sklepanje o predlogu zakona o ustanovitvi Združenja visokošolskih zavodov v Mariboru, 1961; “Zakon o ustanovitvi Združenja visokošolskih zavodov v Mariboru”, 1961). At the founding assembly of the association, held on December 9, 1961, six institutions participated, as the newly established Pedagogical Academy Maribor joined the original five. According to the

newspaper *Delo*, the most extensive discussions at the assembly concerned the transition of Maribor graduates from junior colleges to second-cycle studies at faculties. Two weeks after the assembly, the Academic and Study Library Maribor also joined the association (Bračič, 1991; Gabrič, 2006; Poročilo za 2. volilno skupščino Združenja visokošolskih zavodov v Mariboru, 1965; “Šolski sistem usklajamo s potrebami družbe”, 1961).

The Association of Higher Education Institutions in Maribor was responsible for the development, coordination, and quality of teaching and scientific research at the member institutions. It also decided on all common matters defined by the higher education act, its statute, or special agreements. The association was led by a Head elected from among the professors of the member institutions. The activities of the association were governed by the Council of the Association and the Pedagogical-Scientific Council of the Association, which appointed special committees for key areas and established dedicated funds, such as the Study Committee, the Committee for Elections and Appointments, and the Kidrič Award Fund for students. The Association of Higher Education Institutions in Maribor had almost the same rights and responsibilities toward its member institutions as a university had toward its faculties (Bračič, 1975b; Združenje visokošolskih zavodov v Mariboru, 1971).

3 Efforts to Establish the University of Maribor

As recalled by Vladimir Bračič in his work *Prispevki za zgodovino visokega šolstva v Mariboru* (Eng. *Contributions to the History of Higher Education in Maribor*), preparations for the establishment of the University of Maribor began in the summer of 1971, following the adoption of the first draft of the Resolution on the Long-Term Development of the Socialist Republic (SR) of Slovenia by the Executive Council. Due to the anticipated increase in the number of students in the coming years, it was planned that two university centres would operate in the territory of the SR of Slovenia by 1985. In the interim period, intensive preparations began for the development of higher education in Maribor, with Vladimir Bračič, a member of the Executive Council of the SR of Slovenia, playing a key role. Bračič had already been instrumental in the founding of the first colleges and was also elected director of the Pedagogical Academy. In this context, it is not surprising that he immediately informed the head of the Association of Higher Education Institutions in Maribor about the Executive Council’s position regarding the establishment of a new

university centre in Maribor, marking the beginning of preparations for the new university (Bračič, 1984).

Franci Pivec, assistant to the association's secretary general, played an important role in drafting the long-term development concept for higher education in Maribor (Bračič, 1984). Pivec's proposal was discussed on September 29, 1971, at the 4th session of the Council of the Association of Higher Education Institutions in Maribor. As recorded in the minutes, a lively debate took place during the discussion of this item, and various suggestions and comments were made on the draft. The Council adopted the basic concept of transforming the Maribor association into a university and tasked its head with preparing the necessary analyses and projections. They also proposed the creation of a research project to be financed by the Republic's educational community. The Council decided that the development plan of the association up to 1975 should be considered part of a long-term strategy. Taking into account the comments from the discussion, the plan was deemed realistic, and the head was authorized to submit the appropriately prepared document to local and republic institutions (Svet Združenja visokošolskih zavodov v Mariboru, 1971). Based on the concepts adopted at this session, the Association prepared a comprehensive 43-page document in October titled *Razvojni načrt visokošolskih zavodov v Mariboru: za obdobje 1971–1975* (Eng. *Development Plan of Higher Education Institutions in Maribor: for the period 1971–1975*), which envisioned the establishment of Slovenia's second university centre in Maribor, with approximately 8,000 students (Razvojni načrt visokošolskih zavodov v Mariboru: za obdobje 1971–1975, 1971). In the first half of November 1971, the Association drafted a research project for organizing the new University of Maribor, setting four key goals for the study: 1. to develop a model for organizing the new university that would stimulate positive changes throughout the Slovenian higher education system, 2. to propose an institutional structure that would best encourage creative and effective participation of all participants in the teaching and research process, 3. to create a concept enabling direct communication with industry and the social environment, and 4. to design a detailed system for collecting and processing data on activities and resources in higher education. The report also outlined the research tasks needed to achieve these goals ("Poročilo o poteku projekta univerze v Mariboru", n.d.; ⁴ *Skica predloga raziskovalnega projekta modela organizacije nove univerze v Mariboru, 1971*).

⁴ Although the report is undated, the text indicates it was written after November 27, 1972.

Already in the second half of November, the Maribor Municipal Assembly appointed a special commission tasked with preparing a proposal for the spatial layout of the university. In the initial phase of the commission's operation, the Maribor Institute for Urban Planning proposed locations for several higher education facilities, including the future rectorate at Slomškov trg, in the building of the City Savings Bank. The undeveloped space behind it was designated for the construction of a new university library building. Vladimir Bračič, who was a member of the commission, also mentions it in his work *Prispevki za zgodovino visokega šolstva v Mariboru* (Eng. *Contributions to the History of Higher Education in Maribor*). He was likewise a member of the commission for the development of the Maribor higher education centre, appointed on January 20, 1972, by the Pedagogical-Scientific Council of the Association of Higher Education Institutions in Maribor. According to Bračič, this commission regularly addressed all major issues related to the university's establishment and was very active, reportedly meeting ten times over a six-month period (Bračič, 1984).

From the timeline of the university project's early development, as outlined in the Report on the Progress of the University Project in Maribor, it is evident that during this period, the projected costs for the two-year project were defined, and a funding proposal was submitted to the Executive Committee of RIS. In the request, the Association committed to preparing a detailed programme for the transformation to a university by 1975. The request was approved on January 18, 1972, when the president of the RIS Executive Committee informed them that the project would be funded as requested ("Poročilo o poteku projekta univerze v Mariboru", n.d.).

Discussions about the new university in Maribor were not limited to the mentioned commissions; they also took place at various conferences. On December 17, 1971, Maribor and Ljubljana students discussed the establishment of the university in Maribor at the first session of the Republic Conference of the Association of Slovenian Student Communities (Čerin, 1971). At the conference, Franci Pivec presented the draft project for the future university in Maribor. Among the key challenges expected during the transitional period were securing qualified staff and adequate funding (Šrmpf, 1971a). According to the newspaper *Včer*, student responses to the idea of a second Slovenian university were very positive and encouraging, as it was believed that it would motivate the University of Ljubljana to engage in constructive dialogue, contributing to the creation of a modern university (Šrmpf, 1971b).

A few days later, on December 23, 1971, the topic was also discussed at the first session of the Conference of the League of Communists of Slovenia (Sl. *Zveza komunistov Slovenije*, ZKS) for Higher Education Institutions in Maribor. It was emphasized that the future university in Maribor could not be considered “modern” without a Marxist chair or institute focused on experimental social sciences. On that day, Vladimir Bračič presented the current status, outlined the work programme, and highlighted the key role that the League of Communists of Higher Education Institutions in Maribor would play (D. V., 1971; F. Š., 1971; *Vabilo na prvo sejo konference ZKS visokošolskih zavodov Maribor*, 1971).

From at least mid-December 1971, the idea of a new university reached the broader public, as it was reported in several articles by the major Slovenian newspapers *Večer* and *Delo*. Both papers informed the public about the progress of discussions at the conferences and presented the work done so far in detail. For example, Drago Jančar wrote in *Večer*:

“Theoretical assumptions about the necessity of a new Slovenian university had barely settled into the consciousness of Slovenians when the staff at Maribor’s higher education institutions already offered the Development Plan of Higher Education Institutions in Maribor for the period 1971–1975.” (Jančar, 1972, p. 2)

In Jančar’s article, the development plan for the Maribor university was also presented to the wider public. According to the development plan, the University of Maribor was intended to relieve the University of Ljubljana and to develop disciplines connected to the advancement of modern economic and production systems. These disciplines were categorized into three groups: 1. disciplines necessary for the effective implementation of compulsory eight-year education; 2. disciplines required for the realization of modern technologies, and 3. disciplines essential for the management and organization of economic-production systems (referring to a cluster of legal, economic, and sociological sciences). According to Drago Jančar’s findings, these three clusters of Maribor’s higher education project clearly indicated the formation of a comprehensive university that would foster both the humanities and technical sciences. Regarding higher education in Maribor, Jančar further noted: “Higher education in Maribor has once and for all decided not to be merely a producer of workforce directly needed by the economy, but also a creator of innovative educational and scientific processes.” (Jančar, 1972)

In February 1972, a three-day consultation was held for the presidents of the educational and cultural councils of the federal assembly and the republic and regional assemblies. At the end of the consultation, the participants visited Maribor to learn about the plans for gradually transforming the existing higher education institutions into Slovenia's second university centre. According to newspaper reports, guests from other republics were particularly interested in the guidelines for the future development of the university centre, both from the perspective of regional economic and cultural needs and the broader development of higher education in the Socialist Republic of Slovenia (J. S., 1972; "Od višjih šol do univerze", 1972).

In April 1972, the Maribor university project proposal was officially approved. Vladimir Bračič was appointed as the head of the research project, and Franci Pivec as the project secretary. Numerous individuals were invited to participate in the project, each responsible for specific "research tasks" (Bračič, 1984; "Poročilo o poteku projekta univerze v Mariboru", n.d.). At this point, it is worth highlighting the mentioned tasks and all the contributors:

1. University of Maribor in Self-Managed Socio-Economic Relations: Dušan Kidrič (Advisor, RIS Ljubljana).
2. Development of Profiles and Staffing Needs Relevant to the Future Maribor University: Pavle Kogej (Advisor, Republic Employment Institute Ljubljana).
3. Spatial Design of the University of Maribor: Peter Gabrijelčič (Assistant, Department of Urbanism, FAGG).
4. Organizational Model of the University of Maribor: Vladimir Bračič (Professor, PA), Avguštin Lah (Associate Professor, VŠOD), Ciril Mikl (Associate Professor, VEKŠ), Franci Pivec (Research Associate, ZVZ).
5. Methods for Designing University Curricula: Bogomir Koželj (Professor, VŠOD Kranj).
6. Content and Scope of General Knowledge in University Curricula: Dimitrij Sergejev (Assistant Professor, FF Zagreb).
7. Content and Scope of General Knowledge in University Curricula: Rudi Rizman (Assistant, FSPN Ljubljana, Department of Philosophy, FF Ljubljana).
8. Issues in Higher Education Didactics: Zdenko Medveš and Beno Jurman (Researchers, Pedagogical Institute Ljubljana).

9. University in the System of Lifelong Education – Model Development: Stevan Bezdanov (Professor, FPN Belgrade), Lujo Polanec (Assistant Professor, VAS Maribor), Franci Pivec (Research Associate, ZVZ).
10. Organization of Scientific Libraries at the University of Maribor: Bruno Hartman (Director, Academic and Study Library Maribor).⁵
11. Concept for the Information and Documentation System at the University of Maribor: Stane Kos (Senior Librarian, VŠK).
12. Guidelines and Organization of Scientific Research at the University of Maribor: Milan Pintar (Advisor, RS SRC Ljubljana).
13. Development of Student Welfare Institutions at the University of Maribor: Karel Koren (Director, ŠD Maribor), Franci Pivec (Research Associate, ZVZ).
14. Projection of Staffing Needs for the University of Maribor: Franci Pivec (Research Associate, ZVZ). Bibliography on Higher Education Worldwide: Franci Pivec (Research Associate, ZVZ). (“Poročilo o poteku projekta univerze v Mariboru”, n.d.).

In April 1972, the newspaper *Večer* played a significant role in promoting the establishment of the University of Maribor and in gaining broader public support for its creation. Editor, publicist, writer, and translator Franc Šrmpf published an article on April 18 in *Večer* about the importance of the university for the city and its future development. In the article, the author emphasized the far-reaching significance of founding a university in Maribor, suggesting that it could break the city's economic stagnation, enhance its attractiveness, and prevent population outflow to larger centres or abroad. He pointed out that the university would provide essential scientific support that Maribor's companies had previously sought elsewhere, and contribute to the city's broader development and recognition both within Slovenia and internationally. Šrmpf concluded the article in the style of a skilled propagandist:

“The acquisition of a new university in Maribor is so significant that it cannot be fully described in a single article. Among other things, it represents a window to the world, as the university city by the Drava River will henceforth be able to engage in more qualified dialogue with neighbours near and far, both domestically and across

⁵ A special agreement was signed between the Association of Higher Education Institutions in Maribor and the Academic and Study Library, establishing a thematic collection on higher education issues in the library, forming a basis for further research in this field.

borders. The new university in Maribor marks this city's entry into Europe." (Šrimpf, 1972a, p. 3)

A similar perspective was presented in an undated text titled *Prostorska problematika nove univerze v Mariboru* (Eng. *Spatial Issues of the New University in Maribor*), authored within the Association of Higher Education Institutions Maribor. The importance of the university for the city was noted in the report: "A university gives a city, as a living environment, a specific qualification as a highly developed urban centre." It also highlighted numerous benefits the university would bring to the city, such as influx of financial resources, attraction of researchers, who represent an invaluable source of innovation, increased access to higher education for individuals in the region – estimated to rise by as much as 50% ("Prostorska problematika nove univerze v Mariboru", n.d.).

In April, *Večer* organized a round table discussion on the university in Maribor, inviting representatives of institutions involved in its planning. The discussion was moderated by journalists Franc Šrimpf and France Forstnerič, and participants included: Bogdan Volavšek (Head of the Association of Higher Education Institutions), Franci Pivec (Assistant Secretary of the Association), Vladimir Bračič (Director of the Pedagogical Academy), Marjan Šrbinec, Vili Premzl, Janez Kreševič, Ljubo Humek, Branko Kocmut, Borut Pečenko, Ivan Oman, and Bogdan Raichenberg. *Večer* published the round table discussion in two parts – first at the end of April and the second in mid-May. The main topics included the necessity of establishing a new university in Maribor, its importance for the city, years of efforts leading to its creation, and the issue of space and facilities ("Nova univerza, kaj to pomeni? 1. del", 1972; "Nova univerza, kaj to pomeni? 2. del", 1972).

On June 22, 1972, the Council of the Association of Higher Education Institutions in Maribor discussed the proposal for the urban development plan of the new university in Maribor. It was projected that Maribor would become a university centre with approximately 8,000 students within ten years, requiring between 37 and 64 hectares of land. The session also addressed the issue of housing for professors (Kos, 1972).

A few days later, on June 28, the first joint meeting of the organizational committee for the University of Maribor Project was held. The participants discussed the foundational concept of the university in accordance with the higher education

legislation of the time, the expectations of existing schools, and even broader ambitions, on a “global” level, which proved to be extremely challenging. At the meeting, Vladimir Bračič presented his proposal titled Basic Guidelines for the Content and Organizational Model of the Future University of Maribor. However, participants found the proposal too radical, claiming it exceeded the boundaries of conservative higher education legislation. At the same time, the meeting further radicalised the vision, demanding the elimination of all traditional notions of a university. The report explained that the way out of this complex situation was through public debate at all levels across Slovenia. Numerous scientists, cultural workers, political officials, and business leaders participated. The founding of the University of Maribor was widely reported by all Slovenian media – newspapers, radio, and television. The report noted that this approach led to certain positive outcomes, especially in terms of gauging public acceptance of the initiative (Bračič, 1984; “Poročilo o poteku projekta univerze v Mariboru”, n.d.).



Figure 4: First Consultation of the University of Maribor Project, June 28, 1972

Source: (1. posvetovanje: Projekt Univerze v Mariboru, 28. 6. 1972)

In September and October 1972, numerous republic officials responded to the invitation of Bogdan Volavšek, head of the Association of Higher Education Institutions, and visited Maribor. By autumn 1972, discussions about the

establishment of the University of Maribor had moved beyond academic circles and commissions to political decision-makers: council members, deputies, the municipal assembly, and socio-political organizations (F. F., 1972). Debates also took place within various professional associations and city political organizations, where the concept of the academic and spatial development of the new Slovenian university received broad support (M. K., 1972), although there was also some controversy regarding its location (Čepič, 1972; Jerman, 1972).

On September 7, 1972, the Extended Executive Board of the Association of Engineers and Technicians Maribor, representing 19 societies, discussed the university in Maribor. The meeting expressed strong support for its establishment and advocated for its location in the old city centre on the left bank of the Drava River, where other higher education and cultural institutions were already operating (Butinar, 1972; Čerin, 1972; Stališča upravnega odbora Zveze društev inženirjev in tehnikov Maribor o ustanovitvi Univerze v Mariboru in o njeni prostorski zasnovi, 1972).

A few days later, on September 12, 1972, the Education and Training Section of the Municipal Conference of the Socialist Alliance of Working People (Sl. *Socialistična zveza delovnega ljudstva*, SZDL) held a session in Maribor. The section supported the academic and organizational concept of the university and proposed that the executive board of the municipal SZDL conference, as well as representatives of the republic SZDL conference and the broader public, be informed. *Večer* reported on the session, highlighting the views of Vladimir Bračič and Bogdan Volavšek that: “It is no longer a question of whether the university in Maribor will be established, but rather what kind of university, when, and where.” (F. F., 1972)

On September 18, 1972, the Boards of the Associations of Lawyers and Lawyers in Industry also supported the university’s establishment and advocated for its location in the city centre (F. Š., 1972; “Pravniki za univerzo”; Društvo pravnikov in Društvo pravnikov v gospodarstvu, 1972). On September 19, 1972, the Management and Supervisory Board of the Association of Economists Maribor expressed a positive opinion on the university’s establishment and spatial design, also supporting its location in the city centre (Mnenje o ustanovitvi in prostorski zasnovi univerze v Mariboru, 1972). That same day, the Council of the Association of Cultural Workers, composed of 16 societies and activities, discussed the spatial issues of the new

university and supported its location in the old part of the city on the left bank of the Drava River. Their position paper indicated that the consultation was initiated by the Association of Higher Education Institutions Maribor (Stališča kolegija zveze kulturnih delavcev v Mariboru, 1972).

Due to financial constraints, the idea of a campus-style university was deemed infeasible for Maribor. Therefore, the foundation of the new university had to be based on the facilities of existing higher education institutions. The report titled *Prostorska problematika nove univerze v Mariboru* (Eng. *Spatial Issues of the New University in Maribor*) listed seven requirements for the university's location:

1. The university, as a unified entity, must enable physical communication between its components.
2. It must have a meaningful centre – not just geometric or symbolic.
3. It must incorporate existing higher education capacities.
4. It must maintain a living connection with the city centre (cultural and socio-political institutions).
5. It must be visible in the city's skyline and have a relatively complete image.
6. It must allow for equal distribution of information and innovation.
7. It must offer sufficient potential for spatial expansion. (“Prostorska problematika nove univerze v Mariboru”, n.d.).

In November 1972, students from the Faculty of Architecture, Civil Engineering and Geodesy in Ljubljana opened an exhibition of conceptual designs and models for the future university in Maribor at the Youth Club. At the same time, the Maribor Student Community organized a discussion on the university's spatial concept. However, the event saw little public and student interest, which *Večer* summarized with the subtitle: “Students organized a discussion and no one came” (Šrimpf, 1972b).

On November 27, 1972, the second joint meeting of the organizational committee for the University of Maribor Project was held. The committee reviewed the results of the public debate about the idea of a university in Maribor and finalized the university's foundational model, enabling further work on individual research tasks. Despite progress, challenges remained, particularly regarding the university's organizational model and interpreting guidelines from constitutional amendments (“Poročilo o poteku projekta univerze v Mariboru”, n.d.).

These debates caused delays in the original timeline, prompting in the Report on the Progress of the University Project in Maribor a proposal to extend the project deadline from 1973 to May 1974. The report concluded that this adjustment would not significantly hinder the university's establishment. The report, although undated, clearly originates from after November 27, 1972, and outlines the following research tasks that had reached their final phase: analysis of spatial planning, methods for designing university curricula, organization of scientific libraries, development of student welfare institutions, projection of staffing needs and bibliography on higher education worldwide. Other research tasks were still in progress at the time the report was written, with two showing noticeable delays: content and scope of general knowledge as well as issues in higher education didactics ("Poročilo o poteku projekta univerze v Mariboru", n.d.).

In February 1973, Vladimir Bračič, in agreement with officials from the Assembly of the SR of Slovenia, prepared a draft law for transforming the Association of Higher Education Institutions in Maribor into the University of Maribor, along with a detailed explanation. Bračič's concept of the university in Maribor as a working organization with basic units met with resistance in Ljubljana. At the same time, Ljubljana was preparing a new higher education act, and republic authorities, including the Executive Council, felt it would be better to postpone the transformation until the new act was adopted. As a result, Bračič's draft never became a formal proposal (Bračič, 1984).

In his Contributions, Bračič highlights a key event that significantly influenced the final academic and organizational model of the university in Maribor: a meeting on May 23, 1973, with Sergej Kraigher, President of the Assembly of the SR of Slovenia, and Ela Ulrih – Atena, Chair of the Committee for Education and Culture of the Republic Assembly. In addition to association officials, the meeting was attended by directors of all junior colleges, the secretary of the Intermunicipal Council of the League of Communists Maribor, and the president of the Maribor Municipal Assembly (Bračič, 1974).

This meeting appears to have been pivotal, as the following month Bračič prepared a study titled Academic Concept and Organizational Model of the University of Maribor, which presented the development to date and outlined the core academic and organizational guidelines for the new university. In the study, the University of

Maribor is envisioned as a self-managed community of higher education basic and working organizations, governed by delegates representing academic staff, students, and users that were being particularly interested in the establishment of a higher education organization, either for training personnel or for research collaboration. According to Bračič's study, the basic or working higher education organization was intended to foster the closest possible connection and provide a foundation for equal exchange of various types of work. At the same time, it aimed to generate new self-managed socialist socio-economic relations. This self-management concept of the new university was fully aligned with the principles of the later adopted Constitution of the Socialist Republic of Slovenia and the Higher Education Act (Bračič, 1974; Utemeljitev samoupravnega sporazuma o združitvi v univerzo Maribor, 1975).



Figure 5: Rectorate of the University of Maribor at Krekova ulica 2⁶

Source: ("Skozi oči zgodovine: Rektorat Univerze v Mariboru skozi čas", 2025, p. 54)

⁶ Despite earlier discussions about placing the rectorate at Slomškov trg, the University of Maribor's rectorate operated for several years at Krekova ulica 2, where the Association of Higher Education Institutions had previously been located (Kupna pogodba, 1971).

On June 26, 1973, the Maribor Municipal Assembly addressed the spatial needs of the new university and decided that the prominent building of the former German Credit Bank at Slomškov trg would be allocated for the Junior College of Law and the future university rectorate. The adjacent space was reserved for the future university library, as originally proposed in 1971 (*Problematika in program aktiviranja zgradbe na Slomškovem trgu za prostorske potrebe Univerze v Mariboru*, 1975). Further details on the city's role in establishing the university in Maribor are found in the document *Osnove družbeno gospodarskega razvoja občine Maribor v letih 1974 in 1975* (Eng. *Foundations of the Socio-Economic Development of the Municipality of Maribor for 1974 and 1975*), adopted on March 29, 1974 and published in *Medobčinski uradni vestnik* on June 21, 1974. It states:

“The municipal assembly will participate in the development of the university centre by providing material resources and other activities within its capabilities and jurisdiction to support the long-term rational development of Maribor's higher education centre. Higher education must not operate solely on a regional level, but more broadly across Slovenia, while also connecting with the economy and public services, and responding to their needs.” (*Osnove družbeno gospodarskega razvoja občina Maribor v letih 1974 in 1975*”, 1974, p. 218)

During the university's founding efforts, intensive preparations were also underway for the construction of a new building for the Academic and Study Library, documented by Bruno Hartman in his extensive work titled *Izhodišča za idejni projekt nove knjižnične zgradbe Visokošolske in študijske knjižnice Maribor* (Eng. *Foundations for the Conceptual Design of the New Library Building*) (*Izhodišča za idejni projekt nove knjižnične zgradbe visokošolske in študijske knjižnice Maribor*, 1974).

In April 1974, the Assembly of the Socialist Republic of Slovenia held a session where the draft act on higher education was adopted. According to Bračič, the draft stipulated that higher education working organizations must merge into universities through a self-management agreement (Bračič, 1984). The student publication *Katedra*, published by Maribor students, organized a round table discussion on the draft act, which had been released for public debate (Figure 6). Participants included: Dušan Bobek (Director, Junior College of Economics and Commerce), Vladimir Bračič (Head, Association of Higher Education Institutions Maribor), Josip Butinar (Director, Junior College of Agronomy) and Franci Pivec (Head of Development, Association of Higher Education Institutions) (D. K., 1974).



Figure 6: Round table Discussion on the Draft Act on Higher Education

Source: (D. K., 1974)

In early September 1974, a broader consultation was held with delegates from the higher education working organizations included in the Association. They discussed the draft act and tasked the council of school directors with preparing the core principles for a self-management agreement to merge the institutions into the University of Maribor. Based on these principles, a special working group prepared a draft of the agreement, completed already by February 13, 1975. The Council of the Association reviewed it on February 26, 1975, and decided to distribute it to schools for public debate, scheduled to last until the end of March. At a follow-up consultation on April 7, delegates agreed to prepare a final proposal for the self-management agreement, incorporating feedback from the public debate (Bračič, 1984).

On April 29, 1975, the Assembly of the Socialist Republic of Slovenia officially adopted the new Higher Education Act during sessions of the Chamber of Associated Labour, Chamber of Municipalities, and Socio-Political Chamber. During these sessions, extensive discussions took place on the new act, including on the new university in Maribor (15. seja Zbora občin, 1975; 15. seja Zbora združenega

dela, 1975). A particularly important statement came from Janez Milčinski, Rector of the University of Ljubljana, who said:

“I would especially like to welcome the decision reflected in the text of the proposal you are voting on today, which was already mentioned in the address by comrade dr. Lah. It concerns the adoption of a multi-centred system of higher education, to be realized through the establishment of the University of Maribor. I am convinced that the Maribor Association of Higher Education Institutions, the higher and vocational schools operating there, and the staff involved have earned this right through persistent, years-long efforts. On behalf of the University, I welcome the conclusion of these efforts, which promises the imminent establishment of a university in Maribor. I am confident that this will bring us in line with the development of higher education in other republics, as our system has progressed in recent years and will hopefully continue to do so.” (15. seja Zbora združenega dela, 1975, p. 9)

The Higher Education Act was published in the Official Gazette of the Socialist Republic of Slovenia on May 13, 1975. Two articles are particularly noteworthy: Article 9 mandating that higher education working organizations must merge into universities to ensure a unified system of operations as well as Article 98 requiring that higher education basic and working organizations, communities, universities, and associated labour organizations align their structure and activities with the provisions of the act, and adopt or harmonize self-management agreements and statutes within six months of the act's enactment. (“Zakon o visokem šolstvu”, 1975). According to Bračič, this provided a solid basis to revise the draft self-management agreement into a formal proposal (Bračič, 1984).

Already a day before, on May 12, 1975, two important sessions were held in Maribor. The Commission for the Spatial Allocation of the University of Maribor discussed the proposed layout of the university and the Junior College of Law. The council of school directors adopted the draft self-management agreement and defined the procedure for its review and adoption by the higher education institutions (Vabilo na sejo komisije za prostorsko razmejitev univerze v Mariboru, 1975; Problematika in program aktiviranja zgradbe na Slomškovem trgu za prostorske potrebe Univerze v Mariboru, 1975). A concrete example of this process took place at the Pedagogical Academy. On May 14, 1975, the text of the Self-Management Agreement on the

Merger into the University of Maribor was made available for public debate among staff and students of the Pedagogical Academy. The debate lasted one week, after which department heads submitted written comments. By May 31, the agreement had to be approved by the workers' assembly, the students' assembly, and the academy council (Javna razprava Pedagoške akademije v Mariboru, 1975).

At the end of May, the student publication *Katedra* published an article by Bračič, in which he explained and justified the proposed self-management agreement on the merger into the University of Maribor over two pages (Bračič, 1975a). This publication ensured that even students not actively involved in extracurricular activities were informed about the proposal.

4 Establishment of the University of Maribor

On June 3, 1975, the Association of Higher Education Institutions in Maribor submitted the Self-Management Agreement on the Merger into the University of Maribor to the Assembly of the Socialist Republic of Slovenia, which placed it on the agenda of the 18th session of the Chamber of Associated Labour and the Chamber of Municipalities. On June 12, authorized delegates formally signed the Self-Management Agreement on the Merger into the University of Maribor. The founding members were the College of Economics and Commerce Maribor, Technical College Maribor, College of Work Organization Kranj, Pedagogical Academy Maribor, Junior College of Law Maribor, Junior College of Agronomy Maribor as well as the Academic and Study Library Maribor. The approval process continued on July 2, 1975, when the agreement was discussed in both chambers. It was approved unanimously in the Chamber of Associated Labour, where 119 delegates voted in favour, with 1 abstention and in the Chamber of Municipalities, where all 53 delegates voted in favour. Thus, the Assembly of the Socialist Republic of Slovenia officially confirmed the Decree on the Approval of the Self-Management Agreement on the Merger into the University of Maribor, published in the *Official Gazette* on July 11, 1975 (18. seja Zbora združenega dela, 1975; 18. seja Zbora občin, 1975, "Odlok o potrditvi samoupravnega sporazuma o združitvi v Univerzo v Mariboru", 1975). On July 3, 1975, the Council of the Association of Higher Education Institutions in Maribor officially declared the establishment of the University of Maribor, and Vladimir Bračič was appointed as its first rector (Bračič, 1984).



Figure 7: One of the earliest documents bearing the new seal of the University of Maribor⁷

Source: (Pismo tovarišu Štularju, 1975)

4.1 Ceremonial Proclamation of the University of Maribor

The formal proclamation of the University of Maribor took place on September 18, 1975, at 10 a.m. in the Union Hall in Maribor. The ceremony began with fanfares announcing the start of the event, followed by the arrival of Rectors and Vice-Rectors from Yugoslav universities, as well as representatives from eight universities and higher education institutions from Austria, East Germany, Italy, and Hungary. The event was attended by prominent representatives of the Socialist Republic of Slovenia, including: President of the Presidency Sergej Kraigher, President of the Central Committee of the League of Communists of Slovenia France Popit, President of the Assembly Marijan Breclj, President of the Executive Council of the Assembly Andrej Marinc, President of the Republic Conference of the Socialist Alliance of Working People of Slovenia Mitja Ribičič, General Secretary of Slovenian Trade Unions Ivanka Vrhovščak, President of the Republic Conference of the League of Socialist Youth of Slovenia Ljubo Jasnič, Member of the Federation and Presidency of the Socialist Republic of Slovenia Vida Tomšič, representatives of the Yugoslav People's Army, delegates of Slovenians living abroad, and other public socio-political workers (Bračič, 1976; Forstnerič, 1975; V. V., 1975).

⁷ Already at the end of June 1975, new official seals for the University of Maribor were ordered from a printing house in Ljubljana. The seals featured the word "University" in the upper arc and "in Maribor" in the lower arc. The coat of arms of the Socialist Republic of Slovenia was in the centre. This design complied with the Higher Education Act, which required universities to include the republic's coat of arms in their official seal (Naročilo izdelave pečatov, June 30, 1975).



Figure 8: Rectors of Yugoslav Universities and Other Honoured Guests

Source: (Čerin, 1975)

The ceremony was officially opened by Miran Potrč, President of the Council of the University of Maribor and member of the Executive Committee of the Presidency of the Central Committee of the League of Communists of Slovenia. In his address, he emphasized the importance of merging higher education institutions into a university and highlighted its role in educating professionals who would also be active and responsible participants in self-governing decision-making. He stressed that the formal establishment of the university was not the end of the process, but merely the first step toward a new model of self-governing operation involving all university stakeholders: students, teachers, and delegates of associated labour. The University of Maribor was envisioned to further develop as an open institution connected to the working environment, where professionally qualified and socially engaged teachers would ensure high-quality and Marxist-oriented education and scientific work (Bračič, 1976).

The participants of the ceremonial event were addressed by Andrej Marinc, President of the Executive Council of the Socialist Republic of Slovenia, who described the establishment of the University of Maribor as a significant milestone for the development of higher education and the broader social progress of the

Socialist Republic of Slovenia. He also emphasized that the complete transformation of education would require great effort from both Slovenian universities. In his extended speech, which was published in full the next day in *Večer*, Marinc presented the rector's chain to Vladimir Bračič, the first rector of the University of Maribor, symbolizing the responsibility that comes with the position (“Svečana razglasitev univerze bo del zgodovine Maribora”, 1975).



Figure 9: Speech by Andrej Marinc, President of the Executive Council of the Socialist Republic of Slovenia

Source: (Cvetnič, 1975)

Janez Milčinski, Rector of the University of Ljubljana, expressed his university's support for efforts to reform the educational process, strengthen self-management, promote the free development of science, and collaborate with universities in Yugoslavia and abroad. On this occasion, the University of Ljubljana presented the University of Maribor with a golden plaque, symbolizing future cooperation of both universities in academic and research work. Other Rectors and Vice-Rectors present at the ceremony also expressed their support for the new university (Bračič, 1976), presenting commemorative plaques, messages, and gifts to the first Rector (V. V., 1975).



Figure 10: Andrej Marinc Presents the Rector's Chain to Vladimir Bračić

Source: (Cvetnič & Škofič, 1975, p. 12)

On behalf of the City of Maribor, Vitja Rode, President of the Municipal Assembly, presented Vladimir Bračić with the Golden Coat of Arms of the City of Maribor. This honour recognized Bračić's contributions and the role of Maribor's higher education institutions in the city's development. The establishment of the University of Maribor was not only a milestone for higher education institutions but also for the development of the city, the region, and Slovenian academia. The awarding of the city's golden coat of arms to the university was a tribute to all those who contributed to the growth of the Association of Higher Education Institutions in Maribor and the realization of the university's founding vision (Bračić, 1976).

5 In Place of a Conclusion

The University of Maribor is not merely an educational institution – it is the heart of academic, cultural, and social development in the city of Maribor and the broader region. Its establishment was the result of persistent efforts by numerous individuals who recognized the importance of higher education for the future of Maribor and Slovenia. Through its operation, the university not only educated new generations of professionals but connected the city with the scientific world, fostered innovation, and contributed to economic and social progress. Its role has been and remains crucial for the development of the city, the region, and the entire country.

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LEGAL ASPECTS OF THE ESTABLISHMENT AND DEVELOPMENT OF THE UNIVERSITY OF MARIBOR

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This chapter discusses the development milestones of the University of Maribor, from the legal aspects of its establishment. For 50 years, Maribor has been home to an internationally recognized University with numerous educational programmes and scientific research areas implemented by 17 faculties and two members providing support in the field of librarianship and student housing. The development of the University in the city of Maribor reflects its historical growth, response to social and economic needs, and the formation of its identity. Since its establishment in 1975, the process of status organization and operation of the University of Maribor and its faculties has been carried out in accordance with the provisions of higher education legislation. Based on Article 40 of the Constitution of the Socialist Republic of Slovenia (“Ustava Socialistične republike Slovenije”, 1974) and Article 9 of the Higher Education Act (“Zakon o visokem šolstvu”, 1975), amendments and supplements to the Self-Government Agreement on the merger of six higher education working organizations into the University of Maribor were signed on June 11, 1976. These organizations had been transformed over the past 50 years, new faculties were established, and the University of Maribor, regardless of its name, expanded to other parts of Slovenia.

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University of Maribor Press

1 Introduction

The development of a city over time is not only a story of urban and economic growth but also a narrative of shaping cultural identity and establishing educational foundations as key factors that enable a city to transform from a simple urban centre into a hub of social and creative progress. A city is a living organism that shapes its soul through cultural institutions, art, and scientific and educational achievements. Maribor, as the second-largest city in the Republic of Slovenia with 110,000 inhabitants, played a special role in the initial establishment of higher education institutions outside the capital, Ljubljana, already during the socialist era of the 1960s. The founding of the first junior colleges and other educational institutions played an important role in connecting the social community and creating space for progress and innovation in the economy.¹ From the very beginning, higher education in Maribor had a nationwide character. In the early years of higher education development, students from all Slovenian regions studied in Maribor. Statistics show that in the first years, 45.5% of students came from the Carinthia-Styria area, 15.2% from the Podravje-Pomurje region, and 30.77% from the Zasavje-Savinja area. From Ljubljana, 2.8% were enrolled, 3.9% from Gorenjska, 3.2% from Dolenjska, and 5.5% from the Primorska-Notranjska region. A relatively high percentage, around 9.3%, came from other republics of the former state (Bračič, 1975).

There is no doubt that the establishment of higher education and the founding of the University of Maribor is historically one of the most significant events for the city. The role of higher education in Maribor during the 1960s and 1970s, in the socialist era, was crucial for the economic, social, and cultural development of the city and the wider region. At that time, Maribor was a highly industrialized city and an important centre for the Yugoslav economy. The need for qualified labour drove the development of higher education institutions. Maribor's higher education institutions were primarily established to meet the demand for technically educated

¹ Efforts to organize higher-level education have long been present in Maribor's history, with various more or less successful attempts, particularly in organizing clergy education in philosophy and theology. Near Fala Castle, Benedictines organized philosophical studies as early as 1638. After the transfer of the Lavantine Diocese seat from St. Andraž to Maribor, the first higher education institution for theological studies was established in Maribor in 1859. Alongside this, various cultural, scientific, and educational societies and institutions were founded. For example, in 1903, the Historical Society was established, and by 1904, it began publishing the well-known *Časopis za zgodovino in narodopisje* (Eng. *Journal for History and Ethnography*), which continues to be published under the same name today (Bračič, 1975).

personnel to support industrialization and technological progress. Schools often collaborated with local companies in education, research, and the development of new technologies. The establishment of higher education and, consequently, the university as a centre of research and progress contributed to technological and scientific advancement in Maribor's industry and accelerated the resolution of local challenges. Higher education organizations studied and addressed specific city issues (e.g., traffic, environmental protection, legal needs in the economy) and offered expert solutions at an advanced level. With the founding of the University of Maribor, the city became more attractive to residents who value access to education, significantly contributing to the development of the city's identity. Even today, the phrase "University City Maribor" can be seen on many occasions.²

2 Legal Regulation of Higher Education in Slovenia (1950–1975)

In the 1950s, the People's Republic of Slovenia (hereinafter: PRS) did not have a statutory system regulating higher education. In 1957, the Law on the University of Ljubljana was adopted, which governed the status, organization, and operations of the University of Ljubljana and its member faculties ("Zakon o Univerzi v Ljubljani", 1957). The first law to systematically regulate higher education was the Higher Education Act of the People's Republic of Slovenia ("Zakon o visokem šolstvu v Ljudski republiki Sloveniji", 1960). This act defined both the organizational forms of higher education and the institutions themselves. It distinguished between faculties, colleges, art academies, and junior colleges. Faculties could merge into a university and develop scientific research, while junior colleges and colleges could form associations and engage in scientific work in accordance with their founding act. All forms of higher education institutions could be established by the PRS, a district, a municipality, an economic or other organization, or an association of higher education institutions. In cases where the founder was not the PRS, the founding act had to be approved by the Executive Council. Until the adoption of this act, the PRS established individual junior colleges and colleges through special legislation. Under Article 81 of the cited Higher Education Act, all regulations governing the status and operation of junior colleges that conflicted with the provisions of this act ceased to apply. According to Article 29, all higher education

² As an interesting detail, bronze manhole covers with the city's coat of arms and the inscription "University City Maribor" can be found in the city centre.

organizations were required to harmonize their statutes within one year, with the Executive Council authorized to extend this deadline for junior colleges.

Since the PRS was renamed the Socialist Republic of Slovenia (hereinafter: SRS) in 1963, a second Higher Education Act was adopted in 1965, which required mandatory verification of a higher education institution if it was established by a municipality, a working organization, or another self-managed entity (“Zakon o visokem šolstvu”, 1965, Article 14).

2.1 Legal Foundations for the Establishment of Higher Education Institutions in Maribor

Among the first higher education institutions based in Maribor was the two-year Junior College of Commerce.³ The fact that this school was located in Maribor provoked resistance from certain interest groups in Ljubljana, known for their “conservative narrow-mindedness, arrogance, and self-satisfaction.”⁴ Just two years after its establishment, the school was renamed the Junior College of Economics and Commerce, and by 1969 it began offering a four-year programme as the College of Economics and Commerce, which from 1972 also had the right to award doctoral degrees. In 1959, the Junior Technical College was established with departments for mechanical engineering, electrical engineering, textiles, civil engineering, and chemistry (“Zakon o ustanovitvi Višje tehnične šole”, 1959).⁵ The strong interest in studying at junior colleges in Maribor prompted local authorities to propose to the People’s Assembly of the PRS the establishment of three additional junior colleges, namely a two-year Junior College of Law, a two-year Junior College of Agronomy,

³ Interestingly, on July 2, 1959, the People’s Assembly of the PRS adopted the Law on the Establishment of the Junior College of Commerce without specifying the school’s location. Certain political structures in Ljubljana insisted that the school be based in Ljubljana and even prepared curricula and staffing plans for that purpose. However, the Executive Council (acting as the government) recognized the need for such professionals in Maribor and its economy and, through a special decree (despite resistance from Ljubljana), determined that the school would be located in Maribor (Bračič, 1975).

⁴ This illustrates the resistance of centralized Ljubljana-based higher education institutions to initiatives from Maribor – a pattern that persisted with almost every attempt to transform junior colleges into colleges or faculties. This was one of the defining characteristics of Ljubljana’s attitude toward Maribor in the development of higher education (Bračič, 1975, p. 11).

⁵ The school began operating in February 1960. It was transformed into a four-year Technical College in 1973. Its establishment and development were strongly supported by Maribor’s advanced industry, particularly TAM (Maribor Automobile Factory) and Metalna Maribor (Bračič, 1975).

and a three-year Junior College of Dentistry.⁶ All three began operating in October 1960. The Higher School of Dentistry was abolished in 1970 on the grounds that medical studies could not be segmented and that there was an oversupply of such professionals.⁷ In 1961, the Pedagogical Academy was established by law (“Zakon o ustanovitvi Pedagoške akademije v Mariboru”, 1961). Its founding essentially transformed the detached department of the Junior Pedagogical College in Ljubljana (Bračić, 1975), which had started operating in Maribor in 1960 alongside the three newly established junior colleges. The Pedagogical Academy was founded as a higher education institution for teacher training, organizing first- and second-cycle studies (Haramija, 2011). It educated teachers with higher and university-level qualifications for primary and other schools, as well as other educational institutions. By law, it was granted the right to organize and develop scientific work in the field of education. “The establishment of junior colleges marked an important period for Maribor – indeed, a turning point in its development.”⁸

2.2 Legal Foundations for the Establishment of the Association of Higher Education Institutions in Maribor

The junior colleges and the Pedagogical Academy cooperated closely, soon revealing the need for institutional integration – a need recognized also by the People’s Assembly of the PRS through the adoption of the Law on the Establishment of the Association of Higher Education Institutions in Maribor (“Zakon o ustanovitvi Združenja visokošolskih zavodov v Mariboru”, 1961) (hereinafter: Association) stipulating that future junior colleges in Maribor would also join the Association. If the Association refused membership, the Executive Council would decide upon request by the institution. The Association’s headquarters were initially located at Mladinska ulica 9, later moving to Krekova ulica 2, where it was located from 1975 until 2000, when the seat of the University of Maribor relocated to a new building.

⁶ All three junior colleges were established by decisions of the People’s Assembly of the PRS at the session of the Chamber of Producers and the Republic Chamber on June 21, 1960 (“Zakon o Višji agronomski šoli v Mariboru”, 1960; “Zakon o Višji pravni šoli v Mariboru”, 1960; “Zakon o Višji stomatološki šoli v Mariboru”, 1960).

⁷ Medical circles had already proposed in 1960 that a medical programme be organized in Maribor, but this was deemed infeasible, so a dentistry programme was introduced instead. Initially, classes were held in barracks equipped with modern facilities, but with support from the Health Insurance Institute and the City of Maribor, a modern building was quickly constructed, which, at the time, was the most advanced higher education facility of its kind in Yugoslavia. After completing the third year, students could continue their studies in the fourth year of medicine in Ljubljana (Bračić, 1975, p. 11).

⁸ A visionary statement by France Venturini, then President of the District Court in Maribor, published in an interview in Večer (Z. P., 1960).

With six higher education institutions, Maribor became a strong academic centre. The Association was the first institution of its kind in Slovenia and was based on the legal framework of the University of Ljubljana's status. It operated under a statute adopted at the assembly of its members in December 1961. Essentially, the Association represented the beginning of the future university, which was established in 1975. The role of the central library for Maribor's higher education was assumed early on by the Study Library in Maribor, the only general scientific and well-organized library in the city. Founding rights were initially held by the District People's Committee Maribor, which transferred them to the Association at the end of 1964. In 1970, the Association approved renaming the library to the Academic and Study Library in Maribor (Hartman, 1978).

Similar educational institutions were also established in other Slovenian towns. For example, in 1958, the District People's Committee Kranj founded the Institute for Personnel Training and Work Organization Studies in Kranj, offering a two-year programme for managerial staff from major companies in the Gorenjska region. In 1962, the institute established the Junior Personnel College, confirmed by the Executive Council of the PRS in 1963. In 1965, it was renamed the Junior College of Work Organization in Kranj. The operation of higher education institutions established by municipalities was subject to verification by the republic administrative authority, which was not successful. The Assembly of the SRS adopted the Law on the Establishment of the Junior College of Work Organization, which absorbed students from the dissolved former junior college and continued studies in the field of work organization (Šetinc, 1979).

2.3 Legal Foundations for the Establishment of the University of Maribor

At the end of the 1950s, criticism and debates began in Slovenia and other republics of the former Yugoslavia regarding the higher education system for educating professionals needed by the economy. These criticisms focused primarily on the traditional structure of university education, which did not meet the contemporary needs of the economy nor the socio-political guidelines of the time. The debate concluded at the federal level with the adoption of the Resolution on the Education of Professional Staff ("Resolucija o izobraževanju strokovnih kadrov", 1960). The Resolution emphasized the integration of curricular and extracurricular methods of professional education into a unified system. It recommended introducing various

forms of extracurricular education, including part-time studies and tiered study programmes at faculties, and also allowed for the establishment of junior colleges. The founding of the first junior colleges and colleges in Maribor in the early 1960s was based on the principles of this Resolution. By the late 1960s, the existence of junior colleges in Maribor was “under strong pressure from conservative forces at the University of Ljubljana, with the silent support of some republic administrative bodies” (Zorič, 1979, p. 85). This resistance led to the abolition of the Junior College of Dentistry in Maribor. Debates on higher education ended with the adoption of the Higher Education Act (“Zakon o visokem šolstvu (ZVS)”, 1975), which consolidated the position of higher education in Slovenia and served as the foundation for establishing the University of Maribor (15. seja Zbora združenega dela, April 29, 1975; Socialistična republika Slovenija, 1976).

The adoption of the ZVS marked a political turning point in the development of higher education in Slovenia. For Maribor, it was even more significant, as it ensured the survival of junior colleges and colleges under the reform efforts aligned with the 1960 resolution.⁹ A key feature of the act was the organization of higher education on the principles of self-management, involving users, education workers, and students. Higher education working organizations could be established by associated labour organizations (economic entities), self-managed interest communities, local communities, socio-political communities, and socio-political organizations, provided the founder met the conditions¹⁰ and obtained approval from the Assembly of the SRS. Article 50 of the ZVS specifically regulated the possibility of part-time study. The “ZVS” (1975) also defined the status of a university as a community of higher education working organizations with the status of a legal person, stipulating that these organizations must merge into universities.

Work on drafting the Self-Management Agreement on the Merger into the University of Maribor (hereinafter: the Agreement) began already during the preparation of the ZVS proposal. The Agreement was a comprehensive legal act considered the founding document of the University of Maribor. Its introductory

⁹ “Today’s adoption of the new act is undoubtedly the most revolutionary act in the historical development of our higher education,” said Janez Milčinski, Rector of the University of Ljubljana, at the 15th session of the Chamber of Associated Labour of the Assembly of the SRS on April 29, 1975, during the adoption of the Higher Education Act (Slovenia, 1976).

¹⁰ The »ZVS« (1975) set the following conditions: demonstrated long-term need for professionals in a specific field with higher, university, or postgraduate education; definition of their profile; proposal of necessary teaching and other staff; secured funding for at least one prescribed study cycle; and approval from the Assembly of the SRS.

fundamental principles emphasized that the signatories were merging into a university based on the freely expressed will of workers and students to fulfil tasks requiring a unified system of work and to coordinate and jointly pursue common interests. Matters of common importance were detailed in Article 3, which contained 22 points (Bračić, 1975). Special attention was given to self-management, defining the University Council as the highest body, composed of delegates from member institutions, students, and users. Alongside the University Council, the Council for Self-Management Control operated to monitor the proper, purposeful, and efficient use of resources managed by the university. Since one of the university's essential tasks was conducting habilitation procedures, the Agreement also defined the Habilitation Commission, which assessed whether candidates met the legal criteria for appointment as higher education teachers, researchers, and associates before their election. The Commission could also propose revocation of titles. The Habilitation Commission consisted of 15 members, most of whom were delegates from the Executive Council of the Assembly of the SRS and the Republic Conference of the Socialist Alliance of Working People.

In addition to these bodies, the Agreement defined executive bodies, including the Economic Committee, the Committee for General People's Defence and Social Self-Protection, and the Committee for Study and Research Work (Bračić, 1975). It also established the Collegial Management Committee, responsible for managing university operations and coordinating member institutions. Members of this Committee were appointed by the University Council on the proposal of the Socialist Alliance of Working People from among staff, students, and the secretariat's working community. The President of the Management Committee was the Rector, who had to be a higher education teacher. The Rector was the university's legal representative and decided on the use of funds.

The remainder of the Agreement contained provisions on planning programmes and activities of member institutions, pooling resources for common tasks, and financing activities. The Agreement stipulated that administrative tasks would be carried out by staff organized in a special unit within the university secretariat, headed by the University Secretary General. Transitional provisions required the university to adopt its statute by November 21, 1975, and to elect delegates to the University Council and the Council for Self-Management Control within 30 days of adopting the statute. Since the Agreement received support during the public debate among

the Association's members, its head, Vladimir Bračić, invited all member institutions to adopt a resolution to join the university and appoint a legal representative from among teaching staff and students to sign the Self-Management Agreement on the Merger into the University of Maribor. The signing took place in the presence of representatives of state and local authorities on June 12, 1975, in the large conference hall at the headquarters of the Association of Higher Education Institutions in Maribor, located at Krekova ulica 2. On July 2, 1975, the Assembly of the Socialist Republic of Slovenia confirmed the establishment of the university by adopting the Decree on the Approval of the Self-Management Agreement on the Merger into the University of Maribor ("*Odlok o potrditvi samoupravnega sporazuma o združitvi v Univerzo v Mariboru*", 1975). The Council of the Association officially declared the establishment of the University of Maribor on July 3, 1975. The legal proclamation of the university's establishment, based on the Assembly's approval, was carried out in the conference hall of the Impol working organization in Slovenska Bistrica as a symbolic gesture of the connection between the economy and the University of Maribor.

The formal proclamation of the University of Maribor took place on September 18, 1975, in the Union Hall in Maribor. The ceremony was attended by the highest representatives of republic state bodies and leadership of socio-political organizations, representatives of the economy and non-economic sectors, higher education staff, students at the new university, and representatives of cross-border Slovenes from Carinthia and Primorska, as well as Rectors and Vice-Rectors of twelve Yugoslav universities and eight foreign universities. The ceremonial parchment charter was signed by Dušan Bobek and student Marjan Vešnar for the College of Economics and Commerce, Ljubo Črepinšek and student Marjan Kočevar for the Technical College, Bogdan Kavčič and student Marjan Hajdinjak for the College Work Organization in Kranj, Borut Belec and student Vesna Lapanje for the Pedagogical Academy, Šime Ivanjko and student Tomo Jarni for the Junior College of Law, Stojan Vrabl and student Rado Klančar for the Junior College of Agronomy, Bruno Hartman and Zlata Kert for the Academic and Study Library in Maribor.

3 Organizational Status of the University of Maribor and Its Members

Since its establishment in 1975, the process of status organization and operation of the University of Maribor and its faculties has been carried out in accordance with the provisions of the “ZVS” (1975). Based on Article 40 of the Constitution of the SRS (“Ustava SRS”, 1974) and Article 9 of the “ZVS” (1975), amendments and supplements to the Self-Management Agreement on the Merger into the University of Maribor (“Samoupravni sporazum”, 1977) were signed on June 11, 1976 by the following six higher education working organizations: College of Economics and Commerce Maribor, Technical College Maribor, College of Work Organization Kranj, Pedagogical Academy Maribor, Junior College of Law Maribor, Junior College of Agronomy Maribor, Academic and Study Library Maribor. These institutions were also signatories of the original Self-Management Agreement on the Merger into the University of Maribor. In accordance with Paragraph 2 of Article 9 of the “ZVS” (1975), the university was organized as a community of higher education working organizations and was a legal entity performing statutory functions and tasks delegated to it by the member organizations through the Self-Management Agreement. The university was represented by the Rector, appointed for a two-year term by the University Council on the proposal of the Socialist Alliance of Working People of Slovenia, from among publicly recognized higher education teachers. For internal organization of operations, universities were required under Paragraph 2 of Article 14 of the “ZVS” (1975) to adopt a statute, defining their tasks, organizational structure, the functioning of their bodies, the implementation of workers’ control, and other matters of common interest for workers, organizations, and communities. On this basis, the Council of the University of Maribor confirmed that the Statute of the University of Maribor (“Statut Univerze v Mariboru”, 1977) had been adopted by a majority vote of all employees and students at the University of Maribor and that the Assembly of the SRS had approved its provisions.

To coordinate and develop library, documentation, and information activities at the University of Maribor, a Self-Management Agreement on the Establishment and Operation of the Library-Documentation-Information System of the University of Maribor was signed on May 15, 1977, in cooperation with the University of Maribor Library, linking all libraries of higher education and other working organizations (“Samoupravni sporazum o ustanovitvi in delovanju knjižnično-dokumentacijsko-

informacijskega sistema v Univerzo v Mariboru združenih visokošolskih in drugih organizacij”, 1977). On June 20, 1977, another agreement was signed: the Self-Management Agreement on the Status, Organization, and Operation of the Computer Centre at the University of Maribor¹¹ (“Samoupravni sporazum o položaju, organiziranju in delovanju Računalniškega centra pri Univerzi v Mariboru”, 1977), aimed at unified and coordinated development of informatics and computing and their integration into the pedagogical process and scientific research activities. To provide student accommodation, five student dormitory towers were built between 1978 and 1984, offering a total of 1,349 new beds for University of Maribor students.

The development of new study programmes and the needs of the environment were the reasons for transforming the higher education working organizations united under the University of Maribor from colleges into faculties. In 1985, the Technical College was transformed into the Faculty of Technical Sciences in Maribor. In 1986, the Pedagogical Academy Maribor became the Faculty of Education Maribor under the Decree on Approval of the Name Change of the Pedagogical Academy Maribor.¹² In 1989, the College of Economics and Commerce was renamed the Faculty of Economics and Business Maribor, followed later that year by the College of Work Organization Kranj, which became the Faculty of Organizational Sciences Kranj. Based on the Elaborate on the Study of Law within the University of Maribor and preparations for changes related to the implementation of the study programme, the Law on the Establishment of the College of Law in Maribor was adopted by the Assembly of the Republic of Slovenia on September 27, 1990 (“Zakon o ustanovitvi Visoke pravne šole v Mariboru”, 1990).

In 1992, the composition of the University of Maribor was further reorganized when the Government of the Republic of Slovenia, based on Article 11 and Point 2 of Article 23 of the Research and Development Act (“Zakon o raziskovalni dejavnosti”, 1991), issued the Decree on the Establishment of the University Institute of Information Sciences (“Odlok o ustanovitvi Univerzitetnega inštituta

¹¹ The text of Article 1 of the agreement introduced the abbreviation RCU for the newly established centre.

¹² The Decree on Approval of the Name Change of the Pedagogical Academy (1986), effective February 28, 1986, stated: “At the proposal of the Pedagogical Academy Maribor, the Assembly of the Socialist Republic of Slovenia grants approval for changing the name of this higher education organization to the Faculty of Education Maribor.”

informativskih znanosti”, 1992). This decree transformed the Institute of Information Sciences of the University of Maribor into a public research institute.¹³ According to Article 6 of the Decree on the Establishment of the University Institute of Information Sciences (“Odlok o ustanovitvi Univerzitetnega inštituta informativskih znanosti”, 1992), the University of Maribor committed to providing the initial operating funds as specified in the agreement on the transfer of founding rights for the Institute of Information Sciences of the University of Maribor, signed between the University of Maribor and the Government of the Republic of Slovenia on February 17, 1992. Within the University of Maribor, the Computer Centre of the University of Maribor (RCUM) remained operational and continues to function today. Its primary activities include the development and maintenance of the university’s computing and communication infrastructure and the university’s information system and those of its members.

Changes in the status of individual members continued in 1992, when the Law on the Establishment of the College of Agriculture in Maribor (“Zakon o ustanovitvi Visoke kmetijske šole v Mariboru”, 1992) was adopted to implement programmes in higher education with an agricultural focus, aimed at acquiring and upgrading qualifications and conducting research in the field of agriculture. The Junior College of Agronomy was thus transformed into the College of Agriculture in Maribor, which offered a higher education programme in Fruit Growing and Viticulture.

From 1968, when the Junior Technical Safety College was established, until 1993, no new higher education institution was founded in Slovenia. This stagnation ended with the establishment of the Junior College of Health Care at the University of Maribor, which enrolled its first generation of students in the academic year 1993/1994 (“Nacionalni program visokega šolstva Republike Slovenije (NPVS) – EPA 319 – II – prva obravnava”, 1997). The junior college was established by the Law on the Establishment of the Junior College of Health Care in Maribor (“Zakon o ustanovitvi Višje zdravstvene šole v Mariboru”, 1993) as a public higher education institution, a legal entity operating within the University of Maribor.

¹³ Article 2 of the decree introduced the abbreviation IZUM as the official short name.

On June 2, 1993, the National Assembly of the Republic of Slovenia adopted another law related to the University of Maribor, namely the Law Amending the Law on the Establishment of the College of Law in Maribor (“Zakon o spremembi Zakona o ustanovitvi Visoke pravne šole v Mariboru”, 1993), providing the legal basis for renaming the College of Law in Maribor to the Faculty of Law in Maribor.

In 1993, a new Higher Education Act (“Zakon o visokem šolstvu (ZViS)”, 1993) was adopted, providing the legal basis for the organizational restructuring of public universities at the time, the establishment of independent higher education institutions, and new guidelines for the development of higher education. After the implementation of the “ZViS” (1993), some large faculties at both public universities were reorganized into smaller units, separated by study and scientific research fields. At the University of Maribor, these included: Faculty of Electrical Engineering and Computer Science, Faculty of Civil Engineering, Faculty of Chemistry and Chemical Engineering and Faculty of Mechanical Engineering. The Junior College of Internal Affairs was transformed into a professional college and renamed the Police and Security College, which at that time was the only independent higher education institution in Slovenia to use the legal provision on affiliated membership, becoming an affiliated member of the University of Ljubljana under its Statute (“Nacionalni program visokega šolstva Republike Slovenije (NPVS) – EPA 319 – II – prva obravnava”, 1997). The “ZViS” (1993) also envisaged the adoption of a strategic document for higher education and the National Programme of Higher Education as well as the establishment of the Council of the Republic of Slovenia for Higher Education by the Government of the Republic of Slovenia. This body advised the government on preparing and amending higher education legislation, participated in planning the development of higher education, promoted cooperation among higher education institutions, and performed legally defined tasks related to shaping and changing educational activities of higher education institutions. The Council of the Republic of Slovenia for Higher Education was the predecessor of today’s National Agency for Quality in Higher Education.

Under Articles 85 and 86 of the “ZViS” (1993), it was stipulated that the Republic of Slovenia would become the founder of the University of Ljubljana and the University of Maribor, which would continue to operate as public higher education institutions, and that faculties, art academies, and junior colleges and colleges united under these universities would become members of the respective universities upon

the law's implementation. This was carried out through the adoption of the Act on the Transformation of Universities by the National Assembly of the Republic of Slovenia. For the University of Maribor, the Decree on the Transformation of the University of Maribor ("Odlok o preoblikovanju Univerze v Mariboru", 1994) (hereinafter: Decree) was adopted, under which the university became a legal entity with eight faculties and two professional junior colleges as its members. The most significant changes involved the division into four new technical faculties and the transformation of the Junior College of Health Care into the College of Health Care. Under the Decree ("Odlok o preoblikovanju Univerze v Mariboru", 1994), the University of Maribor began operating as a legal entity on January 1, 1995, and the former Faculty of Technical Sciences ceased to exist. Article 24 of the Decree precisely defined the legal successors related to organizational departments that had previously operated within the Faculty of Technical Sciences ("Odlok o preoblikovanju Univerze v Mariboru", 1994).¹⁴ The University of Maribor Library and Student Dormitories were not included in the text of the Decree ("Odlok o preoblikovanju Univerze v Mariboru", 1994). Subsequently, all organizational changes related to the new status or name of university members or other units were adopted by the National Assembly of the Republic of Slovenia based on Article 15 of the Higher Education Act ("ZViS", 1993) through the Decree on Amendments and Supplements to the Decree on the Transformation of the University of Maribor ("Odlok o spremembah in dopolnitvah Odloka o preoblikovanju Univerze v Mariboru (OdPUM-A)", 1995). The College of Agriculture became the Faculty of Agriculture with the adoption of "OdPUM-A" (1995).

With the Decree on Amendments and Supplements to the Decree on the Transformation of the University of Maribor ("Odlok o spremembah in dopolnitvah Odloka o preoblikovanju Univerze v Mariboru (OdPUM-B)", 1996), the University of Maribor Library became the second institutional member of the University of Maribor.

¹⁴ In accordance with Article 24 of the Decree ("Odlok o preoblikovanju Univerze v Mariboru", 1994), the following new members of the University of Maribor were established: Faculty of Technical Sciences – Department of Electrical Engineering, Computer Science, and Informatics as the Faculty of Electrical Engineering and Computer Science; Faculty of Technical Sciences – Department of Civil Engineering as the Faculty of Civil Engineering; Faculty of Technical Sciences – Department of Chemical Engineering as the Faculty of Chemistry and Chemical Engineering and Faculty of Technical Sciences – Department of Mechanical Engineering as the Faculty of Mechanical Engineering.

By adopting the Decree on the Transformation of the University of Maribor (“Odlok o preoblikovanju Univerze v Mariboru (OdPUM-1)”, 2000), the University of Maribor had 19 members: 17 faculties and 2 other institutions, the University of Maribor Library and Student Dormitories. The adoption of “OdPUM-1” (2000) also defined the basic activities in accordance with the Regulation on the Introduction and Use of the Standard Classification of Activities, as well as study fields and examples of programmes classified according to the ISCED classification. This was extremely important for university funding and determining the study group factor for resource allocation after 2003. “OdPUM-1” (2000) also specified the detailed composition of the University of Maribor Management Board and the ratio between different categories of representatives.

Since 2003, the University of Maribor has undergone several transformations and changes in the composition of its members. With the adoption of Decree on Amendments and Supplements to the Decree on the Transformation of the University of Maribor (“Odlok o spremembah in dopolnitvah Odloka o preoblikovanju Univerze v Mariboru (OdPUM-1A)”, 2003), two new members were added: Faculty of Criminal Justice and Security, transformed from the former affiliated member – the Higher Police and Security School – into a faculty of the University of Maribor, based in Ljubljana as well as the newly established Faculty of Medicine. With Decree on Amendments and Supplements to the Decree on the Transformation of the University of Maribor (“Odlok o spremembah in dopolnitvah Odloka o preoblikovanju Univerze v Mariboru (OdPUM-1B)”, 2004), a new member was established within the University of Maribor: the Faculty of Logistics, located outside Maribor (educational and research activities are carried out in Celje). In 2006, the Faculty of Education was reorganized, resulting in the creation of two new members: the Faculty of Arts and the Faculty of Natural Sciences and Mathematics (“Odlok o spremembah in dopolnitvah Odloka o preoblikovanju Univerze v Mariboru (OdPUM-1C)”, 2006).¹⁵ With the development of new study programmes in nursing, the College of Health Care was transformed into the Faculty of Health Sciences, confirmed by the adoption of Decree on Amendments and Supplements to the Decree on the Transformation of the University of Maribor (“Odlok o spremembah in dopolnitvah Odloka o preoblikovanju Univerze v Mariboru (OdPUM-1D), 2006) in the National Assembly of the Republic of

¹⁵ Under “OdPUM-1C” (2006), at the initiative of the University Senate and the University Management Board, the name of the Faculty of Police and Security Studies was changed to the Faculty of Criminal Justice and Security.

Slovenia on December 20, 2006. In 2007, the University of Maribor established another member: the Faculty of Energy Technology, based in Krško with a branch in Brežice (“Odlok o spremembah in dopolnitvah Odloka o preoblikovanju Univerze v Mariboru (OdPUM-1E)”, 2007). In 2009, the Faculty of Tourism, based in Brežice, was added (“Odlok o spremembah in dopolnitvah Odloka o preoblikovanju Univerze v Mariboru (OdPUM-1G)”, 2009). With changes in study programmes and faculty development, two members changed their names: the Faculty of Agriculture became the Faculty of Agriculture and Life Sciences (“Odlok o spremembah in dopolnitvah Odloka o preoblikovanju Univerze v Mariboru (OdPUM-1F)”, 2009) and the Faculty of Civil Engineering became the Faculty of Civil Engineering, Transportation Engineering, and Architecture (“Odlok o spremembah in dopolnitvah Odloka o preoblikovanju Univerze v Mariboru (OdPUM-1H)”, 2015).

3.1 The University of Maribor Library and Its Role in the Development of Library Services

The origins of the University of Maribor Library (Sl. *Univerzitetna knjižnica Maribor*, UKM) date back to 1903, when the library of the Historical Society for Slovenian Styria was established. At that time, Maribor’s intellectuals, led by dr. Franc Kovačič, laid the foundation for systematic collection and research of documents that testify to the history of Styrian Slovenes. In 1918, through a regulation on mandatory copies, the library secured the right to receive obligatory copies of all printed materials from the territory of Slovenia (“194. Naredba poverjeništvu za notranje zadeve”, 1918, cited in Hartman, 1978, p. 21), and its scope expanded to other fields of knowledge. Maribor’s municipal authorities responded to the expressed need for a public scientific library by adopting a statute in 1925, naming it the Study Library, with the Municipality of Maribor assuming responsibility for its management (Hartman, 1978).

The period between the two world wars and after World War II was marked by the work of Janko Glazer, initially a librarian and later the long-time director of the Study Library. The library’s professional growth was interrupted by World War II, which also affected its collection. A quarter of its pre-war holdings were lost forever. The library’s legal status was defined in 1945 by a regulation of the then Ministry of Education on the establishment of district study libraries for the Celje, Novo Mesto,

and Maribor districts. In 1946, the library was formally established, with funding shared between the Maribor district and the Ministry of Education. The regulation defined the library's local history function for the Maribor district, as well as its educational and scientific role. After several relocations, the library settled in 1952 in a building at the corner of Partizanska and Prešernova ulica in Maribor (Hartman, 1978).

The 1958 Statute of the Study Library defined the Study Library as the central scientific library for Maribor and its surroundings. Efforts to develop the Study Library into a higher education and later a university library began in 1959, alongside the development of higher education in Maribor. With the establishment of the Association of Higher Education Institutions in Maribor in 1961, the Study Library, as the only general scientific library in Maribor, became the central library for Maribor's higher education, assisting in the creation and organization of libraries for new higher education institutions. That same year, the District People's Committee stated in its founding decision that the Study Library was "primarily intended to meet the needs of junior colleges and colleges in Maribor" (Sapač, 2003, p. 38), and in 1964, transferred founding rights to the Association of Higher Education Institutions in Maribor, further strengthening its ties to higher education institutions. Two-thirds of the library's budget was covered by the Education Fund of the Republic of Slovenia, and one-third by the District People's Committee (Sapač, 2003). During this period, the Study Library was both a public library for the Maribor area and the central library for Maribor's higher education institutions (Sapač, 2003, p. 39). In 1964, the library adopted a statute that established it as an independent institution (Sapač, 2003), formalizing its organizational structure to reflect its expanded activities. It was the central library of the higher education institutions in Maribor. From 1972, under the Mandatory Deposit Act ("Zakon o obveznem pošiljanju tiskov", 1972), the library became the recipient of obligatory and archival copies of Slovenian publications, cementing its archival role. Its readership also evolved, with the share of students and teachers from Maribor's higher education institutions steadily increasing since 1962.

In 1970, the library was renamed "the Academic and Study Library in Maribor, with the approval of the Association of Higher Education Institutions in Maribor and the Maribor Municipal Assembly" (Sapač, 2003, p. 40). This renaming was merely a formal confirmation of the role the library had played since 1959. "In 1972, the

library's funding was fully taken over by the Slovenian Education Community, while its local history activities were financed by the Maribor Cultural Community" (Sapač, 2003, p. 39).

The Academic and Study Library in Maribor also participated in the process of establishing the University of Maribor. On June 12, 1975, it signed the Self-Management Agreement on the Merger into the University of Maribor as an equal co-founder alongside six higher education institutions. The agreement was signed on behalf of the library by its then director, Bruno Hartman, and Zlata Kert. After the university's establishment in 1975, the library was renamed the University of Maribor Library (hereinafter: UKM) (Sapač, 2003).

UKM became the central university library, a scientific library for the wider region, a local history library for Maribor and its surroundings, and an archival library for materials from Slovenia. Following international models, UKM aimed to integrate Maribor's academic library activities into an efficient system. Initially, there was an idea for the library to "centrally manage all library matters" (Sapač, 2003, p. 40), but higher education institutions established their own libraries. In 1974, Bruno Hartman prepared the Project for the Higher Education Library System in Maribor (Hartman, 1974), which led to the signing of a self-management agreement in 1977 to establish the Library-Documentation-Information System of the University of Maribor, forming the basis for rational and developmental prospects of academic librarianship in Maribor (Hartman, 1978). This framework also included efforts to build a new UKM building, which was completed in 1988. The grand opening took place on November 25, 1988. The building comprised seven floors with a total area of 11,519 square meters, designed by architect Branko Kocmut, with interior design by Mirko Zdovc (Rajh, 1993).

Located next to the University of Maribor building, the library forms part of the university centre. Many Maribor residents still remember the symbolic relocation of library materials through a "human chain", involving more than 1,000 citizens, who helped move the collection from Prešernova ulica to the new building on Gospejna ulica (Rajh, 1993). In 1982, the library began introducing information technology (Sapač, 1993). A project for automated lending was developed, and based on this, the University Computer Centre (later the Institute of Information Science – IZUM) prepared the first version of computer programmes in collaboration with UKM

librarians. UKM thus became the first library in Slovenia to implement computer-supported lending (Sapač, 1993). Other computer-supported activities followed, including the bibliographic record system for research work at the University of Maribor, later integrated into the cooperative online bibliographic system and services COBISS. By 1987, the library began offering electronic resources.

With the amendment of the decree (“OdPUM-B”, 1996), the University of Maribor Library officially became part of the University of Maribor, formalizing its legal status and continuing the development path it had pursued since 1959. The great importance of the library also derives from the Statute of the University of Maribor (“Statut Univerze v Mariboru”, 2001, p. 13), which contains the following provision: “The University of Maribor Library, as the central university library, provides IT support to educational, research and artistic work conducted at the University. In addition, it coordinates library and information services, the procurement of library and information material and interlibrary loan, compiles the bibliography of the University, educates users about the library material and provides information required for research or professional work also to other users /.../.”

In addition to its “university role,” UKM is also important for other activities. As an archival library, UKM preserves mandatory and archival copies of library materials from the territory of the Republic of Slovenia. As a local history library, it collects, documents, and provides local history materials for the city of Maribor and its wider surroundings. According to the Library Act (“Zakon o knjižničarstvu (ZKnj-1)”, 2001) and the Act on the Realization of the Public Interest in Culture (“Zakon o uresničevanju javnega interesa za kulturo (ZUJIK)”, 2002), UKM is the main academic library, performing tasks within the public service defined in Article 2 of the “ZKnj-1” (2001) and fulfilling the responsibilities of higher education libraries, including coordinating library activities at the University of Maribor. Today, library activities at the University of Maribor are carried out by UKM and 12 member libraries of the University of Maribor, which operate as a unified system, with UKM ensuring their coordination and unified functioning.

4 The Constitutional Principle of University Autonomy – A View on Decisions of the Constitutional Court and the Importance of the Principle of Autonomy for the University of Maribor

The rights to free education and university autonomy are regulated in the section of the Constitution of the Republic of Slovenia (“URS”, 1991) that governs human rights. Article 58 of the Constitution guarantees universities and higher education institutions substantive and financial autonomy and, under the heading “Autonomy of Universities and Other Higher Education Institutions,” stipulates: “State universities and state higher education institutions are autonomous. The manner of their financing shall be regulated by law.” (“URS”, 1991) Autonomy means the right of universities to regulate their academic, administrative, and financial matters independently, without direct interference from the state. During the transition to a new social reality after Slovenia’s independence, the content of the right to autonomy was subject to review by the Constitutional Court of the Republic of Slovenia, which will be explained further below.

4.1 The Role of the Constitutional Court of the Republic of Slovenia in Safeguarding University Autonomy

The initial precedent-setting decision was adopted in 1998, at the very beginning of building a new legal order and defining the position of universities as institutions of tertiary education, independent of political structures (Ustavno sodišče Republike Slovenije, 1998). The decision laid the foundations for the autonomy of state universities. The Constitutional Court emphasized that universities must enjoy autonomy in organizational and academic matters; however, this autonomy does not mean complete independence of individual faculties or academies.¹⁶

The Constitutional Court of the Republic of Slovenia (Ustavno sodišče Republike Slovenije, 1998) set out the following fundamental principles and positions (emphasis by R. K.):

¹⁶ The absence of autonomy at that time was reflected in the inability to have their own rules on appointments and habilitations, study regimes, self-organization, and so forth.

24. To understand the concept of **autonomy**, an important document [...] is also the “Magna Charta” of European universities, adopted in Bologna in September 1988. Two principles are particularly relevant to the case under consideration:

- that the university must be morally and scientifically independent in its research and teaching activities in relation to any political and economic power [...]; and
- that the fundamental principle in the life of universities is the freedom of research, teaching, and education; respect for this principle must be ensured and implemented by both public authorities and the university, each within its own competences [...].

25. The Constitution uses the terms “autonomy” and “autonomous” only in Article 58 and its title. Otherwise, autonomy is not a concept with a clearly defined legal content. Therefore, it must first be interpreted by its meaning [...].

26. University autonomy [...] means that the university decides on its own affairs. However, such a general statement is too vague to serve as a criterion for determining which issues the university should decide about on its own. **The provided definition of the content of the concept of autonomy is too general for at least two reasons.**

27. To speak of university autonomy and for it to function autonomously, the university as a legal entity must first come into existence. The establishment and continued existence of a state university as a legal entity **must be ensured by the state**: such an obligation arises from the third paragraph of Article 57 of the Constitution, from Article 58, which refers to state universities, and from Article 59 [...].

28. Secondly, the university, like any social subsystem, is so closely connected with other social subsystems that there are almost no issues that concern only the university; on the other hand, there are many issues that at first glance belong to other subsystems but can significantly affect the position of universities.

A completely autonomous social subsystem is an internally contradictory concept: if it is completely autonomous, it is no longer social and not a subsystem.

29. **Autonomy is a certain free field of activity**, available only to the “members” (elements) of the subsystem and into which other social factors outside the subsystem cannot intrude [...]. **Social changes have led to greater mutual dependence between science and the social environment. Meaningful and functional governance in the field of science can only be achieved by replacing (complete) sectoral autonomy with greater participation of holders of this autonomy in the decision-making process.** [...]

30. The content of the constitutional right can only be properly interpreted by taking into account the actual circumstances in which this right is exercised. **In this way, university autonomy can be understood primarily as the autonomy of professors to research and teach autonomously (independently), without restrictions and pressures. The state materially regulates relations that it, as a public authority (legislator), can and must regulate for the functioning of both state**

and private universities [...] Autonomy therefore does not only mean the legally guaranteed possibility for the university to adopt its statute and other acts, but also **obliges the state to delineate the field of complete autonomy from the field of public interest and, in regulating higher education, to define the fundamental status-related, personnel, managerial, and financial frameworks for the functioning of state universities, to regulate the basic relations between subjects within the university, and the role of the public in university governance and oversight of its functioning.** [...]

Point 30 of the decision (Ustavno sodišče Republike Slovenije, 1998) contains the key elements of university autonomy. Furthermore, Decision U-I-156/08 from 2011 is also important, as it relates to the issue of university funding. The Constitutional Court of the Republic of Slovenia (Ustavno sodišče Republike Slovenije, 2011) found that university funding was regulated by secondary legislation instead of by law, as required by the second paragraph of Article 58 of the Constitution of the Republic of Slovenia (Ustavno sodišče Republike Slovenije, 1991). It added that this was also contrary to the constitutional principle of the rule of law. The Constitutional Court of the Republic of Slovenia decided that the issue of university funding must be precisely defined by law and not left to the discretion of the executive authority. In 2021, Decision U-I-163/16 further strengthened the constitutional protection of university autonomy. The Constitutional Court of the Republic of Slovenia (Ustavno sodišče Republike Slovenije, 2021) found the unconstitutionality of Article 10 of the “ZViS” (2012) because it did not clearly define the rules on the legal status of university members. This decision closely aligns with the first mentioned decision (Ustavno sodišče Republike Slovenije, 1998) regarding the definition of substantive autonomy.

4.2 The Importance of the Development of the Constitutional Right to University Autonomy for the University of Maribor

As a state university, the University of Maribor is a direct beneficiary of the constitutional right to autonomy (Article 58, “URS”, 1991), which is also an important aspect of the right to free education. Autonomy is crucial for the development of scientific and pedagogical work. The need for the Constitutional Court decisions (Ustavno sodišče Republike Slovenije, 1998, 2011, 2021) also indicates that state universities, including the University of Maribor, faced challenges related to governance and funding policies, namely, the influence of political authorities. All three decisions had significant implications for the University of Maribor.

The Constitutional Court first addressed the issue of the legal status of universities and their members in Decision U-I-34/94 (Ustavno sodišče Republike Slovenije, 1998). Among other things, it found the unconstitutionality of the then-valid Higher Education Act (“ZViS”, 1993), which stipulated that university members were also autonomous. The legislature responded to this decision of the Constitutional Court of the Republic of Slovenia (Ustavno sodišče Republike Slovenije, 1998) by adopting amendments to the Act in 1999 (“Zakon o spremembah in dopolnitvah zakona o visokem šolstvu (ZViS-A)”), but unfortunately, it only remedied the unconstitutionality regarding autonomy and not the one that the Constitutional Court of the Republic of Slovenia (Ustavno sodišče Republike Slovenije, 1998) found in relation to the legal status of the university and its members. Since Article 10 of “ZViS” (2012) did not define the legal status of university members clearly and unambiguously, the required conduct of universities was not predictable. Therefore, the Court of Audit of the Republic of Slovenia requested further intervention from the Constitutional Court of the Republic of Slovenia years later (in 2016). The Court of Audit of the RS found that the statutory regulation of the legal status of university members differed among the three public universities in the Republic of Slovenia (members of the University of Ljubljana had legal personality, while members of the University of Maribor and the University of Primorska did not). Ordinary courts, despite previous findings of the Constitutional Court of RS on the ambiguity of Article 10 of “ZViS” (2012), adopted the position that only the university itself is a legal entity, but that university members could be granted the capacity to be a party in proceedings concerning their market activities. Such unclear statutory provisions, which allowed university members to acquire legal personality, created numerous practical problems. The inconsistency was evident even in court register entries, as only members of the University of Ljubljana could be registered as independent legal entities.

Therefore, regarding Decision U-I-163/16, the Constitutional Court of RS (Ustavno sodišče Republike Slovenije, 2021) explained that the principle of clarity and determinacy of regulations requires that norms be defined clearly and precisely so that they can be implemented, do not allow arbitrary conduct, and unambiguously define the legal position of the subjects to which they apply. It further clarified that university autonomy in regulating the status of its members is limited and that the university cannot regulate this issue independently; it must be defined by law. Since Article 10 did not clearly and unambiguously define the legal status of university

members in a way that would make the required conduct predictable, the Constitutional Court of the RS found that the provision was inconsistent with the principle of clarity and determinacy of regulations under Article 2 of the Constitution of the Republic of Slovenia. Nevertheless, the Constitutional Court of RS did not annul the provision, as its annulment would have left certain issues regarding the legal position of university members completely unregulated, causing even greater unconstitutionality. The University of Maribor had already followed the original reasoning of the Constitutional Court of RS. Its internal organization was therefore consistent with the concept of a single autonomous institution even before this decision.

Decision U-I-156/08 (Ustavno sodišče Republike Slovenije, 2011) had direct positive consequences for the funding of the University of Maribor. The requirement to strictly follow the Constitution of the Republic of Slovenia and define university funding through clear statutory rules, rather than leaving it to the executive authority and secondary legislation, ended a long-standing unconstitutional practice in which universities were constantly dependent on the will of the government. Without statutory regulation of funding, arbitrariness in the allocation of resources is possible, leading to unpredictability and hindering long-term planning of university operations.¹⁷ This is particularly important for the University of Maribor, which, although not located in the capital, must operate in an environment where stable and fair funding is crucial for its competitiveness and development.

The Constitutional Court of RS was thus first faced with the interpretation of the concept of university autonomy, which, under the new legal order, also meant a different response to social reality. Before independence, the system was dominated

¹⁷ The second paragraph of Article 58 of the Constitution of the Republic of Slovenia requires the state to regulate the manner of funding state universities by law. "ZViS" did not regulate the content of the funding method. Universities could not predict their funding position based on the law. The Constitutional Court of RS therefore decided that paragraphs 1–3 and paragraph 5 of Article 73 of ZViS were inconsistent with the second paragraph of Article 58 of the Constitution of the Republic of Slovenia ("URS", 1991). Since ZViS did not set funding criteria as a statutory framework for detailed regulation by secondary legislation, paragraph 4 of Article 73 of ZViS amounted only to a blank authorization for the executive branch to determine the funding method independently, which was also inconsistent with the second paragraph of Article 58 of the Constitution of the Republic of Slovenia ("URS", 1991). The government issued the regulation on public funding formally based on statutory authorization, but without substantive dependence on ZViS. By regulating the matter originally (and not by law), the entire then-valid Regulation on Public Funding of Higher Education Institutions and Other Institutions ("Uredba o javnem financiranju visokošolskih zavodov in drugih zavodov", 2017) was inconsistent with the second paragraph of Article 58 of the Constitution of the Republic of Slovenia (Ustavno sodišče Republike Slovenije, 1991).

by one-party rule, which certainly did not support the development of university autonomy. Autonomy, as a central and necessary precondition for the functioning of truly free universities, was highlighted as a fundamental value of Article 58 of the Constitution of the Republic of Slovenia (“URS”, 1991). Especially with Decision U-I-34/94 (Ustavno sodišče Republike Slovenije, 1998), university autonomy was placed on a pedestal, while the other two decisions (Ustavno sodišče Republike Slovenije, 2011, 2021) significantly strengthened it. The scientific and pedagogical component of autonomy cannot mean that universities entirely decide on their position and mode of operation and that they are not obliged to respect the Constitution and laws. However, it importantly means that the content of the constitutional right under Article 58 of the Constitution of the Republic of Slovenia (Ustavno sodišče Republike Slovenije, 1991) can be understood primarily as the autonomy of the academic environment, allowing its members to research and teach autonomously (independently), without restrictions and pressures. This is also a necessary precondition for a free society. The then-valid Higher Education Act (“ZViS”, 2012) did not give full weight to autonomy. The Constitutional Court of the Republic of Slovenia (Ustavno sodišče Republike Slovenije, 2021) therefore provided important substance to the principle of autonomy, within which universities can now operate more freely.

An even tougher issue than the content itself was university funding. Despite numerous calls from universities for the legislature to regulate it at the statutory level, intervention by the Constitutional Court of RS (Ustavno sodišče Republike Slovenije, 2011, 2021) was necessary. The absence of statutory regulation of funding allowed the executive branch to maintain a state of uncertainty, in which universities were *de facto* subordinated to political will. There is a significant difference between funding being a matter decided by the executive branch at one of its Thursday sessions (perhaps even a correspondence session) and funding being agreed upon in parliament (by law), where, under democratic decision-making conditions, the coalition and opposition regulate such an important issue for the long term, thus enabling a stable operating environment independent of any (new) government. We recall situations when, even at the beginning of the academic year, the university did not know how it would be funded for the current academic year or how it would implement its study programme. A system that allowed each government to change funding turned already difficult long-term planning into a situation where even planning for the current academic year was difficult or impossible.

These constitutional aspects and decisions of the Constitutional Court of RS (Ustavno sodišče Republike Slovenije, 2011, 2021) reflect efforts toward autonomy – both directly in substance and indirectly in financial terms. Both reflections are important. The Constitutional Court of RS contributed to an understanding of the principle of university autonomy¹⁸ that enables universities to operate independently of state structures, with freedom of teaching and research, which enriches society and is a necessary condition for its progress.

5 Conclusion

In the 1950s, the People's Republic of Slovenia (LRS) did not have a statutory system regulating higher education. The first law to systematically regulate higher education was the Higher Education Act of the People's Republic of Slovenia ("Zakon o visokem šolstvu v Ljudski republiki Sloveniji", 1960). Since LRS was renamed the Socialist Republic of Slovenia (SRS) in 1963, a second Higher Education Act ("Zakon o visokem šolstvu", 1965) was adopted in 1965, which required mandatory verification of higher education institutions.

The legal basis for establishing the University of Maribor was the signing of the Self-Management Agreement on the Merger into the University of Maribor ("Samoupravni sporazum o združitvi v Univerzo v Mariboru", 1975). The signing took place on June 12, 1975, in the presence of representatives of state and local authorities. On July 2, 1975, the Assembly of the SRS confirmed the establishment of the University of Maribor by adopting the Decree on the Confirmation of the Self-Management Agreement on the Merger into the University of Maribor ("Odlok o potrditvi samoupravnega sporazuma o združitvi v Univerzo v Mariboru", 1975). The Council of the Association officially declared the establishment of the University of Maribor on July 3, 1975. The ceremonial proclamation of the establishment of the University of Maribor and the ceremonial signing of the Self-

¹⁸ In case U-I-112/19, the Constitutional Court of RS (Ustavno sodišče Republike Slovenije, 2022) was faced with the question of whether the principle applies not only to state universities but also to private universities – concessionaires. Unfortunately, due to an amendment to "ZViS" (2021), the case ended with a procedural dismissal, and the Constitutional Court of RS lost the opportunity for a substantive decision. The provision that the Constitution of the Republic of Slovenia guarantees autonomy to state universities, but not to non-state (private) universities and higher education institutions, was explained by the Constitutional Court of RS (Ustavno sodišče RS, 1998) in U-I-35/94, considering the fact that, conceptually, only founders can intervene in the operation of private-law entities in accordance with the rules they have adopted or agreed upon, and the state as an authority. Founders define whether a university or higher education institution is private or state. This position has not yet been subject to new review in circumstances where concessionaires are funded with public resources.

Management Agreement on the Merger took place on September 18, 1975, which is also celebrated as the University of Maribor Day.

Since its establishment in 1975, the process of status organization and operation of the University of Maribor and its faculties has been carried out in accordance with the provisions of the “ZVS” (1975). The development of new study programmes and the needs of the environment were the reasons for transforming higher education work organizations, which were merged into the University of Maribor, from colleges into faculties. The activities of the University of Maribor Library and student accommodation capacities provided by Student Dormitories also expanded. The University of Maribor has undergone several transformations since its establishment, changing the composition of its members, establishing new members, and incorporating the Faculty of Criminal Justice and Security. The University of Maribor Library has also developed, becoming a scientific library for a wider region, a local history library for Maribor and its surroundings, and an archival library for materials from Slovenia.

The functioning of the University of Maribor has been influenced by the constitutional right to autonomy, which is also an important aspect of free education. Autonomy is crucial for the development of scientific and pedagogical work, and the decisions of the Constitutional Court of the Republic of Slovenia determine the direction of its functioning and organization.

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SPATIAL DEVELOPMENT OF THE UNIVERSITY OF MARIBOR

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This chapter examines the fifty-year spatial development of the University of Maribor within the context of social, political, and urban planning dynamics. In its first twenty-five years of operation, despite significant spatial and infrastructural constraints, the university successfully integrated its activities into the urban fabric of Maribor, establishing an extensive network of facilities along the left bank of the Drava River. Over the past decades, the expansion of university infrastructure has progressed dynamically, resulting in the establishment of more than twenty units across eight municipalities, continuously shaped through interactions among institutional demands, urban planning strategies, and broader socio-economic trends. Open and long-term spatial planning, coupled with adaptability, remain core principles underpinning the university's spatial development, which today plays a key role in the sustainable transformation of regional areas and in reinforcing the urban identity of towns and settlements.

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University of Maribor Press

1 Social and Political Influences on the Spatial Development of the University of Maribor

The spatial development of the University of Maribor and the awareness of the importance of establishing a clear spatial concept for the urban development of Maribor were strongly influenced by dynamic social events at the turn of the 1960s and 1970s. These events triggered intense political and professional debates on the locations and methods of integrating university buildings into the urban space.

At the initiative of the Association of Higher Education Institutions, the Municipal Commission for Higher Education Development in Maribor commissioned the Institute for Urban Planning Maribor (Sl. *Zavod za urbanizem Maribor*, ZUM) to prepare a programme of spatial solutions and urban planning documentation for the new university. ZUM drafted a proposal for university development zones, taking into account normative spatial capacities totalling 61.8 hectares and adapting to the association's requirements, which anticipated between 37 and 64 hectares of land for 8,000 students. The selection of available vacant and existing areas was approved by the municipal urban planning commission on June 13, 1972, at its 45th session.

At that time, the authorities did not address the spatial development of university infrastructure solely from the perspective of urban development but also through a political lens. Fearing student unrest, which was shaking European university centres at the time, they leaned toward establishing a spatially detached campus on the outskirts or outside the city, enabling greater control over the student population and limiting its direct social engagement in urban life. The alternative was to disperse students and faculties throughout the wider urban area (Gabrijelčič, 2024).

In line with the client's expectations, the Maribor Institute for Urban Planning (ZUM) proposed the establishment of a university campus under Pekrska gorca. The proposal for a spatially detached campus on the western edge of the city's right bank was based on the previously recognized development potential of Maribor. During World War II, the German occupier had already outlined in its urban development plan the concept of creating a green belt as a development zone with public functions of regional importance. ZUM designed the western edge of the city as a green corridor connecting the foothills of Pohorje across the Drava River to Kalvarija, incorporating areas and facilities for health and education. The Maribor hospital was placed between the foothills of Pohorje and a new central area with a

regional media centre under Pekrska gorca, while the proposal for the university campus with sports and recreational facilities extended from Pekrska gorca across the Drava River to the city's left bank.

The concept of a spatially isolated university campus on the city's edge was publicly opposed by students of the Ljubljana School of Architecture. In early 1972, under the mentorship of Edvard Ravnikar, they prepared a proposal for the spatial development of the University of Maribor in Seminar 25, based on its integration into the city centre.

The proposal stemmed from a comprehensive urban analysis, which included a study of students' daily activities – from studying and living to sports, leisure, and cultural activities – and emphasized the need for minimal distances between them. Students warned of the long-term impact of the university's spatial placement on urban development, stressing that the proposed “remote location would be anything but an integrative urban phenomenon – it would be an enclosed and alienated formation.” (Gabrijelčič, 1972b)

Their key argument was that the university must become a generator of urbanity in the city. Therefore, they advocated for a spatial development that would actively contribute to Maribor's urban development and the establishment of a broader urban context. They cautioned against creating an “atmosphere of a university reserve” and argued that the university should be planned as a living part of the city, in the same dialogue with it as museums, galleries, libraries, theatres, or philharmonic halls – “which are not scattered throughout the city, yet do not function as a ‘cultural reserve.’” University facilities should also be accessible to other residents, as “the university should resemble an Italian piazza, attracting all people.” (Gabrijelčič, 1972c)

2 The Concept of a Chain University

In the autumn of 1972, students united in the group **Alternativa**, composed of students from Ljubljana and Maribor, launched a broader social campaign against the establishment of a university campus on the city's outskirts, separated from the urban core. Their initiative was based on the concept of a city-integrated university, in which the rectorate, faculties, university library, and other university facilities would be incorporated into the existing urban structure. On this basis, they

advocated the idea that the university, through its infrastructure, should actively shape the public space of the city centre, and students should become an indispensable part of urban life.

Through their professional, cultural, and political actions, supported by the wider cultural public, the students initiated a debate that was not merely urbanistic and architectural but also sociological, political, and ideological. It opened key questions about university autonomy, the social role of students, and the nature of education. The student proposal did not rely on the spatial concentration of university functions in one area but on the idea of a **chain university** (Gabrijelčič, 2024), composed of interconnected thematic university clusters distributed across different parts of the city. This way, university activities would establish a dynamic network of knowledge, culture, and social life, and the university would not be isolated but would become a city-forming element actively shaping urban development and social dynamics. The students demonstrated the boldness of their proposal through a public forum and an exhibition in the building of today's rectorate (then a secondary and primary school) on Slomškov trg.

The proposed chain structure of the university was based on the development of four interconnected spatial-programme clusters:

- economic-commercial cluster in the block between Prešernova ulica, Razlagova ulica, Partizanska cesta, and Cafova ulica,
- technical faculties cluster in the block between Strossmayerjeva, Prežihova, Koroška, and Gosposvetska cesta,
- natural sciences cluster and Faculty of Agronomy under Kalvarija,
- university centre cluster with the rectorate, library, multi-purpose congress centre, and large lecture halls in the block between Slovenska, Orožnova, and Strossmayerjeva ulica and Slomškov trg, connected to the area of the Faculty of Law and the Pedagogical Academy in the block between Gregorčičeva, Strossmayerjeva, and Vršarjeva ulica

On September 22 and 23, 1972, *Večer* published a two-page article titled “Ali univerza v Mariboru ali Maribor kot univerzitetno mesto” (Eng. *A University in Maribor or Maribor as a University City*) (Gabrijelčič, 1972a, 1972c), and just a few days later, on September 26, a full-page interview with Edvard Ravnikar and Emil Kržišnik under the title “Univerza da, toda kje?” (Eng. *University Yes, But Where?*)”

(Čepič, 1972). In it, Ravnikar strongly supported the student initiative and emphasized:

“I favour locations in the city centre for several reasons. A campus, or a university with student dormitories and other facilities, separates students from the city. Student do not integrate into the city, and as I have been told, Maribor faces the problem of losing highly educated people. If we want to attract students to the city, and that is the ultimate goal of the university in Maribor, we must include them in it.” (Gabrijelčič, 1972a)

Kržišnik expressed a similar view:

“The professor and I stated that we advocate for a university in the centre and not for a campus because the student must be included in social life, and therefore the locations of new buildings should be in the middle of existing schools. All this offers great opportunities for the city’s development, and any fear that students will burden the city is unnecessary. On the contrary, they will give it life. Finally, a marginal remark: the student is ultimately also a consumer.” (Čepič, 1972)

2.1 Development and Impact of the Chain University Concept

The concept of the chain university gained broad support among architecture and urban planning experts, both in Maribor and at the national level. In its efforts to secure wider professional backing, the Alternativa group partnered with architect Branko Kocmut, one of Maribor’s key architectural and intellectual figures, who, as a former assistant to Ravnikar, had previously proposed integrating the university into the city centre of Ljubljana. In collaboration with students, by the end of 1972 he prepared a location assessment for the chain university concept in the block between Gregorčičeva, Strossmayerjeva, and Vršarjeva ulica. The zoning test was based on the idea that the university’s central administrative and social sciences hub would grow within the medieval city core and along its western edge. The assessment confirmed the feasibility and rationale of a complex investment on the northern edge of the city centre, but the initiative sparked heated debate due to its spatial complexity and numerous unresolved issues. Architect Milan Černigoj pointed out two key problems with the proposed location near the Pedagogical Gymnasium. The university’s development could require the removal of areas and facilities intended for youth sports. Increasing traffic could cause similar problems to those in

Ljubljana, where most faculties are located along polluted and noisy Aškerčeva ulica, which even triggered student protests there.

Due to time pressure, complicated property ownership issues, and limited possibilities for further development of university infrastructure, the original chain university concept had to be adapted. Although the plans were not fully realized, the concept had a crucial impact on the university's spatial policy.

The most important achievement of the student initiative was preventing the establishment of a politically controlled and spatially detached university campus. Students convinced city policy-makers that only a city-integrated university could contribute to the long-term development of the city and society.

Through its influence on urban planning and political decisions in the following decades, the student proposal consolidated the concept of the university as an integral part of the city and its social life, and established conceptual foundations for the future spatial development of the academic community:

- University as a university centre – academic forum: The university should unite faculties, libraries, research institutes, and student dormitories within the city core, intertwining them with existing urban structures and public life, enabling intensive interaction between the academic community and city residents.
- Cultural and educational role of the university: University infrastructure should include cultural and social activities such as theatres, galleries, concert halls, and spaces for student initiatives, thereby strengthening the connection between academia and the wider public and establishing the university as a centre of cultural creation and exchange of ideas.
- University as a generator of healthy urban life: The university should create a system of sports and recreational areas located in close proximity to the urban fabric, accessible to both students and the wider community, promoting quality urban living and a healthy lifestyle.
- Housing policy and social integration of students: Instead of concentrated student dormitories, the university should establish a network of student apartments dispersed across different parts of the city, enabling greater social integration of students into the urban environment and encouraging daily interactions between students and residents.

3 The First Twenty-Five Years – Pragmatic Development of University Infrastructure on the Left Bank

During the first twenty-five years, a pragmatic yet strategically significant model of university development was established, firmly anchoring the university within the urban fabric and contributing to its role as a generator of urbanity and social life in Maribor.

Spatial, financial, and infrastructural constraints required adjustments to the original plans for locating university infrastructure in Maribor. Instead of an ambitious concept of a chain university or an isolated campus on the city's outskirts, a pragmatic solution was chosen, one based on feasibility and gradual development. Unlike Ljubljana, where the construction of university infrastructure was often separated from the process of urban renewal, Maribor's urban planners recognized an opportunity for simultaneous restoration and revitalization of areas damaged during World War II. University development was thus directed toward inner-city regeneration, filling gaps in the built fabric and reviving degraded areas.

A key decision was made at the end of 1972: university infrastructure would primarily develop within the existing urban fabric on the left bank of the Drava River, while construction on the right bank was placed in the background. This decision had long-term consequences for the city's development:

- The university became part of the urban fabric rather than retreating to an isolated peripheral campus.
- The remediation of post-war voids contributed to the structural and functional renewal of the city centre.
- University buildings were integrated into the existing urban design, fostering dynamic coexistence between the academic sphere and city life.

Initial proposals for spatial integration of university infrastructure into the urban fabric, prepared by ZUM in 1973, were based on five strategic areas. The concept preserved the key idea of a university centre while considering city-forming and functional aspects that would enable the interweaving of university, economic, and social life. The university centre, with the rectorate and university library, was planned on the western edge of Slomškov trg, in the building of the former Savings Bank and its hinterland. This decision followed the concept of an academic forum,

establishing a link between the university and the city's cultural-historical core. An economic-commercial complex was envisaged in the eastern part of the city, near the business centre, to support university activities and enable synergy with the urban economy. Student housing was planned along the southern edge of the City Park, ensuring proximity to recreational areas while maintaining urban integration of the student population. The bulk of university infrastructure was to develop west of the medieval core, along Smetanova ulica, where spatial possibilities for expansion existed. The social sciences complex, with the Pedagogical Academy as its central building, represented a key open question, as the most suitable location for its integration into the urban context had to be found. In searching for the optimal location for the social sciences complex, the issue arose of balancing spatial accessibility, traffic constraints, and the long-term development of university capacities (Reichenberg, 2016). This decision was crucial not only for the university's functionality but also for strengthening its role as a generator of urban life and social dynamics.

3.1 Establishing University Campuses and Filling Voids on the Left Bank

After World War II, the left bank of the Drava River, particularly its western part, was assigned the role of a space for renewal, transformation, and future development. Urban voids created by wartime destruction, depopulation, and demolitions represented not only a spatial challenge but also an opportunity for a new institutional identity for the city. Filling these voids was not merely a construction process but an urban planning reflection on how to shape a new urban fabric that would not simply restore the past but lay the foundations for the future – the future of knowledge.

University campuses in Maribor did not emerge as the result of a unified vision but rather as a collection of spatial decisions, responses to available land, and pragmatic solutions accompanying the institutional growth of the higher education system. Thus, educational zones gradually formed on the left bank—first along Smetanova ulica, then on the eastern edge of the city centre, and finally with the campus on the Vrbanski plato. This linear spatial logic of development, stretching between the city centre and its edge, inscribed university infrastructure into the very structure of the city – as a backbone connecting different parts of the urban organism.

The first university buildings in Maribor were established in areas heavily damaged during World War II. Planning of university facilities was entrusted to the company Komunaprojekt, led by architect Ljubo Humek. Humek played a key role in shaping the city's urban development – he prepared the regulatory plan for Maribor in 1949 and directed the renewal of war-damaged areas. His strategy of urban renewal through measured spatial interventions was so self-evident at the time that later experts largely overlooked it. However, his urban planning perspective was broad enough to confidently outline the development of higher education.

The beginnings of university infrastructure development in Maribor must be understood in the context of the city's urban planning programme in the early 1960s. In 1962, an urban design competition was announced for the city centre, which had been almost completely destroyed after the war, especially in its eastern part. With the construction of Titov most, the area was further divided by a new main road, and the city was intensively developing its spatial development concept.

Based on the best competition entries, the authors of the three awarded projects jointly prepared a synthesis plan for the development of the city centre (Prikovič, 1982). According to this plan, the central urban area was to be divided into two parts: the western part with commercial and cultural functions, and the eastern part with business and administrative functions. A key feature of the proposed layout was the introduction of a transverse pedestrian connection – from the old city core, through an underpass beneath the main road, to the new bus station on Mlinska ulica.

While the first university buildings filled voids in the eastern part of the city, the western part of Maribor, on the left bank of the Drava, gradually developed as a space for living and education. On surfaces designated by city planners for educational activities, the seeds of educational zones were established.

From the beginnings of the secondary school centre along Smetanova ulica (1965), the spatial development and architecture of which were designed within Komunaprojekt by Branko Kocmut, university infrastructure for technical faculties later evolved (Zavrnik, 1994). The urban concept of the secondary school centre was based on the idea of the street as the central organizing element. Smetanova ulica, established as the backbone of the entire educational area, was complemented by a central plaza – a forum in front of the main entrance of the then Junior Technical College, forming the heart of the knowledge space. Kocmut undoubtedly

understood this forum as an “extension” of the transverse pedestrian axis he had already co-designed in the 1963 competition project for the city centre. The entire area was interwoven with open green spaces and thoughtfully designed built environments – paths connecting the “open” building fabric into a coherent whole while enabling links to the broader urban context. The design followed the modernist idea of buildings in greenery. All buildings were planned according to a unified spatial and structural concept, and most were completed by 1970.

Development of the Technical Faculties Area, west of the city centre, progressed gradually – primarily out of necessity to construct and meet the immediate spatial needs of individual faculties, rather than based on a unified concept of spatial structuring for a university campus (Pečnik, 2017). As a result, the original park-like design of the area quickly disappeared.

After abandoning the idea of establishing a cultural-educational zone along the northern medieval edge of the city, urban planners designated a new, less development-constrained area on the western edge of Maribor. There, construction of the university campus began, with the Pedagogical Academy and Student Dormitories forming its foundation. The campus, located outside the originally outlined spatial concept, forced urban planners to seek appropriate connections with the city centre. This opened the possibility of gradually extending university infrastructure along Smetanova ulica.

By placing the campus on the city’s edge, the idea of reorganizing the city centre through the integration of pedestrian connections was reinforced. These connections were intended to link the transport hub (bus station) with the university campus, creating a new university pedestrian axis. This axis gradually materialized through the establishment of public open spaces and – due to its spatial logic – organically integrated into the broader concept of the university’s spatial expansion.

In this context, the idea of developing a university centre along Smetanova ulica – as the backbone of university infrastructure from Slomškov trg to the Vrbanski plato – found its place in the revised city spatial plan in the 1970s. This vision anticipated the gradual spatial growth of the university and the reservation of land along Smetanova ulica, extending to the new university centre in the Koroška campus on the western edge of the city.

The building of the University of Maribor Library, designed by architect Branko Kocmut, filled an urban void on the western side of Slomškov trg in 1989. Its construction significantly contributed to shaping the university core in the city centre. Architecturally, the building reflects Kocmut's understanding of representative architecture, evident in the vertical rhythm of prefabricated concrete façade elements, similar to the new section of the Slovenian National Theatre. The original design envisioned an entrance directly from Slomškov trg, but this solution was not realized after the rectorate was located in the former Savings Bank building. Instead, the main entrance faces west, where a gallery corridor connects spaces with accompanying programmes for students and citizens. Today, the University Library is not only a study space but also an important centre of cultural and social activity. With numerous spaces for various activities – from the Maister Library (1999), newspaper reading room, exhibition area, and multi-purpose hall to the day and night ČUK reading room (2013) – it acts as a generator of public life and strengthens the connection between the university, students, and the city's residents.

3.2 Student Dormitories as Spatial and Social Infrastructure of the University City

The construction of student dormitories in Maribor arose from the need to establish a supportive environment for studying and living during the formation of university programmes. Student accommodations play an important role not only as functional infrastructure but also as spaces that contribute to shaping Maribor's identity as a university city. Four student housing complexes were established in the city, created in three development cycles. Their spatial development occurred in parallel with the stages of university building construction. In total, 15 student dormitories were built, forming areas with the highest concentration of young people in the city today.

Most dormitories have been renovated in recent decades, improving living conditions and raising the standard of accommodation. Beyond providing housing, student dormitories have introduced significant social and intellectual dynamics into the urban fabric. They host numerous extracurricular activities that enable young people's personal, professional, and academic development.

In 2000, the Student Dormitories became an independent member of the University of Maribor, further strengthening their role within the university system and reinforcing their institutional identity.

4 The New Millennium – Expansion of University Infrastructure to the Right Bank of the Drava

Although it initially seemed that after twenty-five years the University of Maribor would no longer play a key role in further urban development and it did not actively participate in the preparation of the city's urban design between 1995 and 2000, planners nevertheless preserved all development areas where this was still possible. During this period, the university did not exhibit significant spatial needs, yet it became clear that the possibilities for expansion on the left bank of the city were practically exhausted.

With new urban planning approaches that no longer allowed “reservation of large areas” for university expansion, evident in the fact that Smetanova ulica could not withstand the pressure of private investors amid weak public financial support, it became obvious that further integration of the university had to rely on upgrading and expanding existing infrastructure within the built urban fabric, while new development areas needed to “open up” on the right bank of the Drava River.

In the new millennium, spatial initiatives and strategic decisions regarding development were almost entirely left to the university. It began systematically strengthening its presence in the city centre through new constructions and renovations, while simultaneously expanding infrastructure to the right riverbank, primarily in the field of health sciences. The development imperatives of this period were not based solely on spatial expansion but introduced new priorities, emphasizing the quality of architectural design and careful arrangement of associated outdoor spaces – a dimension often overlooked.

During this time, several architecturally outstanding buildings were integrated into or renovated within the urban space, establishing themselves as high-quality examples of Slovenian educational architecture: the Rectorate, renovation and new construction of the Faculty of Electrical Engineering and Computer Science, renovation of the Faculty of Law, renovation and extension of the Faculty of Health Sciences, new construction of the Faculty of Medicine, the complex of the Faculty of Agriculture and Life Sciences, and the renovation of the Baronica House and the old Rectorate on Krekova ulica.

4.1 New Constructions and Renovations of Architectural Heritage in Service of the University

At the turn of the millennium, the **Rectorate of the University of Maribor** moved from its building on Krekova ulica to the former Savings Bank (2000), whose renovation was designed by architect Boris Podrecca. In this project, he enhanced the classicist structure of the neoclassical palace with bold architectural interventions that gave the building a contemporary character. In front of the building, he arranged an entrance plaza with an alley of distinguished professors, establishing a symbolic spatial link between the Rectorate and Slomškov trg and emphasizing the university's presence within the urban fabric.

The central architectural feature of the renovation is the elevated atrium with a sunken multi-purpose hall and two vertical structures on the southern and northern wings of the building. This expressive architectural language continues inside, where the new city palace offers several exceptionally high-quality spatial ensembles. Among them stand out: the multi-purpose hall with spaces for the University of Maribor Professors' Association in the basement, the representative atrium with a seating platform sloping toward the entrance – its central part dedicated to inscribing the names of distinguished university members, the reception hall with preserved stucco and paintings, the exhibition space on the first floor, the university leadership offices on the second floor, and the Knights' Hall in the attic. These spaces are largely intended to connect the Rectorate with the public.

The architectural design of **the renovation and new construction of the Faculty of Electrical Engineering and Computer Science** at the University of Maribor, created through an invited competition (2004, architects Ljubo and David Mišič), introduced a distinctly urban-forming building into the western educational part of the city. With its extended canopy over the southern entrance area, it marked the southwestern corner of the technical faculties campus, while its atrium design introduced, for the first time, the element of a covered atrium. This atrium, featuring a small amphitheatre-like staircase on its northern side, establishes an important "living space of the faculty" – a gathering area for students, visitors, and citizens. Its design influences the quality of life and spatial dynamics in terms of light flow, microclimate, and the integration of various faculty functions.

On the right bank of the city, at the northern edge of the educational zone in Tabor, university infrastructure began to develop with the conversion of the western part of the building for health sciences in Maribor – originally built in 1964 – into the **Faculty of Health Sciences** of the University of Maribor (2004). Architect Janko Zadavec designed the renovation of the western wing of the former school and added a distinctive identity extension, giving the building an urban-forming character while introducing a completely new spatial quality through specific vertical stacking of lecture halls. Although the building is relatively small in surface area, it created several unique ambiances, the most notable being the atrium with a fountain element. In 2023, the library (D. Mišič) expanded into the atrium, and project documentation is currently being prepared for an extension and further spatial capacity expansion toward the Magdalena Health Centre.

The renovation of the **Baronica House**, one of the best-preserved Art Nouveau buildings in Maribor, represents a high-quality example of preserving the primary visual and material appearance of a cultural monument. The architecture of Fritz Friedrigger was restored in 2014 under the direction of D. Mišič. Despite necessary adaptations to meet modern standards and its new purpose – research and study activities of the Faculty of Electrical Engineering and Computer Science – the renovation respected the historical character of the building and preserved it as an important spatial landmark within the university infrastructure.

A similar approach characterizes the renovation of the building at **Krekova ulica 2**, the former Rectorate, also designed by Fritz Friedrigger. In 2016, the building was renovated for the needs of the Department of Architecture (renovation authors: J. Zadavec and U. Lobnik). This is an example of carefully considered interventions in a neoclassical structure, demonstrating that with a well-thought-out spatial concept and rationalized architectural details, a high-quality renovation can be achieved even with limited resources (Kosec, 2017). The minimalist architectural approach, which simultaneously establishes a clear pedagogical spatial structure, was awarded the Plečnik Medal.

4.2 Searching for New Sites on the Right Bank

With the introduction of medical studies in Maribor, the question of selecting the most suitable location for a new faculty – one not foreseen in previous urban plans – was reopened after a long time. Architect Igor Recer prepared expert studies with

several possible locations, and the university, in cooperation with the Municipality of Maribor, decided to build along the Drava River, in the immediate vicinity of the city hospital (Nikolić, 2013). The design of the building was entrusted to architect Boris Podrecca, who, with a rational, functional, yet distinctly urban-forming concept, exploited numerous spatial potentials of the Drava riverbank near the Old Bridge.

In 2012, north of the University Clinical Centre, **the new building of the Faculty of Medicine** of the University of Maribor was erected, transforming a centuries-old degraded urban area into a high-quality city environment. The building is considered one of the most urban-forming architectural designs in Slovenia. Podrecca introduced numerous city-making elements into the elongated volume, articulated in its two upper floors into a larger educational and a smaller research block. The building establishes a striking vista along the Drava River and is distinguished by open public spaces and new urban dynamics. The most prominent spatial element is the pedestrian path running through the building, connecting Taborški plato with the riverside promenade. The outdoor arrangement was coordinated with the redesign of the river space, as defined in *Scenarij prostorskega razvoja mesta za potrebe Evropske prestolnice kulture 2012* (Eng. *Spatial Development Scenario for the European Capital of Culture 2012*) (Lobnik, 2012). This document envisioned revitalizing both riverbanks by introducing three new footbridges: to Maribor Island, at the site of the medieval bridge, and near the railway station, thus creating a circular riverside promenade.

The Municipality implemented the circular riverside path in 2024, while the university, together with the University Clinical Centre, developed a strategy for further development of the clinical complex and expansion of research and educational capacities. Projects are also underway for a new Tabor Promenade, planned to run from the Pekarna Youth Center to the secondary education zone with the Youth Park. Its design is based on the competition project for the new Tabor Health Centre building and envisions the establishment of a pedestrian zone connecting all educational facilities in this area.

5 Strategy for Spatial Development of the University in the New Millennium

Although it often appears that the spatial development of the University of Maribor is not the result of a long-term spatial strategy or the city's urban planning policy, but rather a series of unrelated, seemingly random social situations and events that gradually intertwined with the urban fabric through the spontaneous integration of university infrastructure, a significant shift occurred with the Spatial Development Strategy of 2012.

With this strategy, the university systematically defined its spatial interests for the first time and began actively co-shaping the development of both the University Clinical Centre and the broader educational zone on the right bank of the Drava River. The strategy is based on the principle of compaction – concentrating university functions within the city – and envisions two main approaches: expansion of existing university areas onto adjacent surfaces, and infill development within already established university structures.

Since 2016, the Department of Architecture at the Faculty of Civil Engineering, Transportation Engineering, and Architecture of the University of Maribor, under the leadership of Uroš Lobnik, has systematically prepared strategic foundations for these directions (Lobnik, 2016). The key guideline remains the establishment of well-designed, spatially clear, and urbanistically meaningful university zones. Design experiments developed by students and experts of the department are based on the realization that, after three decades, it is time to complete the development of certain university areas, primarily through spatial restructuring and high-quality integration into the built structure of the city.

5.1 Co-Shaping and Increasing the Share of Public Open Spaces

The Spatial Development Strategy establishes guidelines for upgrading the existing integration of university infrastructure into public space and city life. Since 2012, the university, in cooperation with the municipality, has been systematically improving the quality of connections between university infrastructure and the city's existing open spaces, significantly co-shaping them. During the construction of the Faculty of Medicine of the University of Maribor, a pedestrian path was created leading to the Drava riverbank, with a link to public restrooms in the pier of the Old Bridge.

A ramp was established, connecting Trg revolucije to the entrance of the Faculty of Medicine, and with the decision to demolish the building in front of the main entrance, a pocket square with a small amphitheatre and drinking fountain was formed just before the completion of construction, serving as an extended forecourt of the main entrance. By relocating the sculpture by D. Čadež from in front of the Art Gallery to the park in front of the university trio on Koroški plato (2012), the university revived the process of enriching public open spaces with sculpture, a practice that had faded since the Forma Viva project in the 1960s. In front of the building on Krekova ulica, a Parklet was arranged as a pilot example of introducing sustainable urban mobility policies and connecting university buildings (Šmid, 2022) or their spaces with the city (House of Architecture Maribor exhibition space). The process of sustainable redesign of Koroška cesta, which includes narrowing the road profile, establishes a linear pocket park with green islands and a drinking fountain, and generates a new entrance area to the city campus (Lobnik & Novak, 2022).

5.2 Consolidating University Infrastructure – The Role and Significance of the Urban University Campus

The conceptual foundations for establishing processes of consolidating university infrastructure in the city centre are based on the creation of a “smart urban university campus”, which:

- combines educational, research, and social functions, shaping the city’s identity and cultural pulse of urban life, and acts as one of the key generators of urban development;
- encourages interaction among students, professors, entrepreneurs, and residents through open spaces, accessible libraries, public lectures, interdisciplinary centres, and research infrastructure, creating synergy between academia, the economy, and society at large;
- develops innovation infrastructure and exerts economic influence through the development of start-ups, technology parks, and laboratories for experimental projects; its connection with industry enables the direct application of research into practice, fostering the development new industries and attracting investors;
- relies on urban regeneration and enhancement of architectural quality, energy efficiency, and building resilience; in this respect, it incorporates eco-oriented buildings, green spaces, and sustainable mobility solutions, making it a generator of sustainable development.

The university plans to establish two campuses on the left bank, continuing the process of integrating university infrastructure into the built fabric and thus into the city's vibrant life.

5.3 Strategy for Establishing the Technical Faculties Campus of the University of Maribor (INNOVUM)

The development area of the Technical Faculties campus currently consists of eleven interconnected buildings that host higher education and research activities. The existing built infrastructure is over forty years old, worn out, and in need of renovation or replacement with new constructions. Over the years, faculty spaces have become dispersed among different buildings; therefore, the goal of establishing the campus is the final redistribution of activities, enabling the autonomous operation of four faculties while maintaining shared facilities and spaces.

In this context, expert foundations have been prepared (Lobnik et al., 2024a, 2024b), offering the basis for a comprehensive study of all surfaces and a proposal for space reallocation. It is planned that by 2029, the complex will be reorganized and expanded into a campus of four spatially connected yet operationally autonomous faculties with integrated research infrastructure. With a special extension to the north side of Smetanova ulica, a clear spatial ensemble will be established, where individual faculties will be arranged as follows: Faculty of Electrical Engineering and Computer Science in the southwest part, Faculty of Civil Engineering, Transportation Engineering and Architecture in the southeast part, Faculty of Mechanical Engineering in the northwest part, Faculty of Chemistry and Chemical Engineering in the northeast part of the area. Such redistribution and transformation of the complex will enable greater functionality, improved connectivity, and synergy among faculties, contributing to the further development of an innovative and integrated university campus.

5.4 Strategy for Establishing the Koroška Vrata Campus (INNOVUM)

The university plans an extensive restructuring of the campus area on the western edge of the city in cooperation with the municipality. In this area, three new faculty buildings will be constructed on the southern side of the pedestrian axis running through the campus, while the entire zone will gradually be transformed by increasing the share of outdoor green spaces, areas for sports and recreation, and

expanding the capacity of student dormitories (Lobnik & Novak, 2022). In this context, the redesign of the ŠTUK building is also planned, improving the quality of spaces for student socializing and short-term activities, as well as the university sports hall.

5.5 Strategy for Establishing the Faculty of Medicine Campus of the University of Maribor (INNOVUM)

The development of faculties that are or will be linked to the University Clinical Centre Maribor has been thoroughly analysed in cooperation with the Clinical Centre and representatives of the Municipality of Maribor. The spatial development study (Lobnik & Novak, 2021) established guidelines for further spatial development, aiming for the highest possible quality of urban integration of university infrastructure within the Tabor city district. This approach considers the fact that urban development in the second millennium east of Titova cesta encroached on areas long reserved for the expansion of the University Clinical Centre. Design experiments were carried out in the area of the Pekarna Youth Cultural Centre, west of the Psychiatry complex, and east of Titova cesta, in the immediate vicinity of the railway triangle. In 2024, the university decided to locate the university research centre of the Faculty of Medicine on land east of Titova cesta, thereby outlining the future development of the University Clinical Centre on the right bank of the city.

6 Development of University Infrastructure Outside the Municipality of Maribor

At the beginning of the new millennium, a process of expanding university infrastructure beyond the Municipality of Maribor was initiated, strengthening the significance and role of the University of Maribor in Slovenia, particularly in the northeastern part of the country. Here, university infrastructure assumes a similar role as in Maribor – it acts as an urban regenerator of smaller settlements by revitalizing undeveloped or degraded areas, supports the renovation of historical zones and buildings, and enables the development of research centres and faculties in industrial and craft zones. With strong support from local municipalities, the University of Maribor has, over fifteen years, developed infrastructure in the municipalities of Hoče, Celje, Velenje, Krško, Brežice, Ljubljana, and Kranj.

The Faculty of Organizational Sciences of the University of Maribor, based in Kranj, is integrated into the broader urban environment. The educational area on the edge of the historic part of the city allows close interaction with the local economy, public institutions, and the wider regional community. It is located near Kranj's main transport infrastructure, ensuring good accessibility through various modes of mobility (public transport, private cars, cycling). Thus, the faculty is embedded in the city's urban rhythm and well connected to key points (e.g., the city centre, railway station).

The Faculty of Criminal Justice and Security of the University of Maribor, which evolved from the College of Police and Security Studies in Ljubljana, became a full member of the University of Maribor in 2003. After two decades of coordination, the renovation and upgrade of a historic building in the centre of Ljubljana is underway, aiming to provide safe and functional spaces for modern teaching and criminal justice and security studies. State-of-the-art laboratories will enable further research development in the field of criminal justice and security and provide high-quality study environments. The reconstruction project, expected to be completed in 2026, indirectly represents an investment in broader safety.

The Faculty of Logistics of the University of Maribor opened its premises in 2005 in the municipalities of Celje and Krško. In Celje, the faculty initially operated in the business core on the northern historic edge of the city, while in 2023 a decisive step was taken – the agreement with the Municipality of Celje was signed to relocate the faculty to the former Economic School building in the city centre. Project documentation is currently being prepared for the conversion of the Economic School into new faculty premises, which will be part of a co-located technological and innovation hub situated in the educational zone of the city centre.

The Faculty of Energy Technology of the University of Maribor, established in 2007, is based in Krško with a permanent unit in Velenje. The locations for its activities were not chosen randomly, as Krško and Velenje are Slovenia's largest energy hubs. Students thus have direct contact with major energy systems, which is an added advantage for teaching and research work. In both Velenje and Krško, after the faculty's establishment and initial "hosting" in historic city areas, decisions matured to develop university infrastructure in the industrial zones of both cities. In Krško, the faculty's headquarters will be located in the Vrbina industrial-business zone, near the GEN-I company and the nuclear power plant, adjacent to the faculty's

existing research facility. In Velenje, relocation to the premises of the Old Power Plant is underway, with strong municipal support providing infrastructure for the university.

The renovation of Hompoš Castle in 2008 (L. and D. Mišič) into premises for the **Faculty of Agriculture and Life Sciences of the University of Maribor** marked a significant departure from traditional castle renovations in Slovenia, demonstrating that heritage building restoration can be planned innovatively and with high quality. An important segment of the complex is the educational landscape of the university campus, which connects its activities to the broader urban and regional space. The Botanical Garden, one of the most recognizable public gardens in the region, serves as a socialization space where the university engages with the local population. In the case of Meranovo, the viticulture centre, the renovation of cellars and farm buildings established an infrastructure forming the basis for further development of an educational and research hub.

The Faculty of Tourism of the University of Maribor began operating in 2009 in the historic centre of Brežice, generating one of the most important public functions in the town. In cooperation with the municipality, preparations are underway to relocate the faculty to new premises in a former industrial building on the northern edge of the historic core, meaning the university acts as a regenerator of a degraded urban area.

7 Preserving the Tradition of the Principle of Openness

Over the past fifty years, the University of Maribor has established more than twenty university zones across eight municipalities, all closely connected to the local environment and the built fabric. Their development occurs in constant interdependence between the needs of faculties and the university and the goals of urban development of municipalities, making it subject to dynamic spatial planning adapted to future challenges.

The direction of built infrastructure development still follows one of the key principles formulated fifty years ago by students of the Alternativa group, who advocated for the university's active role in the city and society:

“Planning the yet unknown form into which the university will evolve must be intensive and always open to all new possibilities. The principle of openness to development opportunities and the orientation accompanying the development process must become the deeper meaning of the urban plan.” (Gabrijelčič, 1972a, 1972b)

The Office for University Infrastructure Development carefully shapes modern development guidelines based on ecologically oriented sustainable construction, qualitative upgrading of the existing building stock, and integration of university infrastructure into urban environments. It strives to establish inclusive, sustainable research zones – “smart campuses” – that emphasize the socio-economic role and significance of the university in urban spaces and offer new standards of living quality grounded in the principles of the New European Bauhaus. This approach not only preserves and connects the existing spatial potentials of the university’s wider areas but, through cooperation with municipalities, enables university zones to develop into the highest-quality urban spaces, serving as models for the city and providing additional vibrancy.

The further spatial development of the University of Maribor is not limited to static solutions but remains adaptable and boldly oriented toward the future, as the university continues to strive to play an active role in regional development, urban growth of settlements, and shaping a responsible society.

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HUMAN RESOURCE DEVELOPMENT AT THE UNIVERSITY OF MARIBOR – AN ENCOURAGING WORKING ENVIRONMENT

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The article discusses the development of human resources at the University of Maribor (UM), which is crucial for academic, research, and organisational excellence. Since its establishment in 1975, the University of Maribor has been systematically professionalising its employees, including academic, research and non-pedagogical professional staff. Staff development has been adapted to societal needs, as reflected in the introduction of new pedagogical approaches, digital technologies, and the Bologna study system. An analysis of the 2004–2023 period shows fluctuations in the number of employees, peaking in 2023 with 2,093 staff members. There is a noticeable trend of growth in research and teaching staff with higher academic titles and the professionalisation of the workforce, especially in higher pay grades within groups H and J. The UM Strategy 2021–2030 (Univerza v Mariboru, 2021b) emphasises the importance of interpersonal relations, work-life balance, and continuous skills development through programmes such as "Enhance UM". It has been established that the University of Maribor follows modern trends in digitalisation, innovation and lifelong learning, contributing to the development of its staff and society as a whole.

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1 Introduction

Human resource development is one of the fundamental HRM processes and represents an important part of employee satisfaction and the long-term progress of the organisation. As such, it systematically contributes to staff retention and career development. From the very beginning, the University of Maribor has ensured the systematic training, education and guidance of employees in the development of their competencies. The development of digital technology has enabled the implementation of such training and education remotely, which gives employees additional opportunities to participate and engage in acquiring new knowledge. This method of training and education of employees at the University of Maribor thus encompasses a broader concept of human resources development, as it goes beyond the Slovenian space and integrates into the international environment. This opens up new opportunities for the development of individual potential, enabling individuals to structure and shape new knowledge from various fields.

2 A Brief Overview of Human Resource Development at the University of Maribor

Human resource development at the University of Maribor began even before the University was established, namely in the Association of Higher Education Institutions of Maribor, which was founded in 1961. With the development of society and adaptation to the needs of the economy, the association strengthened the professional and scientific knowledge of its staff until, in 1975, the need to establish the University of Maribor became apparent. In its early days, the University focused primarily on developing study programmes and forming an academic staff, which was the basis for the implementation and development of study programmes. With the growing number of students in the following years, there was also an increased need to develop not only academic but also non-pedagogical professional staff. This was reflected in higher levels of education among academic staff and greater professionalism among non-pedagogical professional staff (Rozman, 2005).

Before 1993, the status of academic staff was regulated by the predecessor to the current law, which is the Career-Oriented Education Act (Tancer Verboten, 2019). In the 1980s and 1990s, with the introduction of new pedagogical approaches, teacher training programmes also began to develop. This was prompted by the

adoption of the Higher Education Act in 1993. Tertiary education began to strengthen, and the University of Maribor experienced broader growth with the establishment of new higher education institutions, which also led to accelerated staff development (Radonjič, 2005).

In the new millennium, the University of Maribor continued its expansion with new higher education institutions and an increase in the number of students. During this time, the Bologna Process developed and became established, contributing to the professionalisation and strategic development of human resources. This coincided with the development and establishment of the Bologna Process, which enabled the creation of comparable and transparent study programmes, a uniform credit system, and international student mobility. The University of Maribor began implementing programmes for the training of teaching staff with an emphasis on new didactic approaches and Bologna standards based on the internationalisation of students (Univerza v Mariboru, 2024). As a member of the European Union, Slovenia has committed itself to implementing the objectives of the Lisbon Strategy (Kolar & Komljenovič, 2011).

In 2013, the University of Maribor adopted the University of Maribor Development Strategy 2013–2020, which aimed not only to continue the existing staff development system, but also to become a globally recognised innovation ecosystem that would enable a collaborative and creative environment for all employees. In preparing and adopting the University of Maribor Development Strategy 2013–2020, the University of Maribor followed the guidelines for human resource development set out in the National Higher Education Programme 2011–2022. In 2011, the Republic of Slovenia set goals for the successful operation of the higher education sector, which focused primarily on increasing the number of researchers and doctors of science, requiring universities to strengthen the qualifications of their staff, improving career opportunities, and incorporating the principle of equal opportunities for researchers.

In the field of staff development, the University of Maribor consequently set the following strategic goals (Univerza v Mariboru, 2014b):

- promoting academic values and developing professional and ethical practices;
- developing human resources;

- pursuing an active employment policy;
- ensuring more appropriate working conditions and social security;
- developing university culture.

The University of Maribor Development Strategy 2013–2020 (Univerza v Mariboru, 2014b) also highlighted the development of research staff, based on the Research and Innovation Strategy of Slovenia 2011–2022. In 2010, the University of Maribor adopted the University of Maribor Human Resources Strategy for Researchers for the period 2010–2014, which highlighted the following areas of researcher development (Horvat, 2010):

- ethical and professional aspects;
- employment;
- working conditions and social security;
- training.

In line with the development of research staff, the University of Maribor Development Strategy 2013–2020 (Univerza v Mariboru, 2014b) focused on promoting the transfer of scientific, research, and artistic achievements to the environment and thus the cooperation of university staff with the economy.

3 Analysis of Personnel Data at the University of Maribor From 2004 to 2023

The following section presents statistical data on employees at the University of Maribor. The trend in the total number of employees from 2004 to 2023 is presented. The trend in employees by individual groups is also presented, specifically the trend in higher education teachers and associates employed in group H (researchers and professional associates) by pay grade, and employees in supporting positions or employees in positions in group J (professional staff, administrative staff, and other professional technical staff) by pay grade.

3.1 Total Number of Employees at the University of Maribor by Year

Table 1 shows data on the total number of employees as of 31 December from 2004 to 2023.

Table 1: Number of employees as of 31 December by year

Year	Total number of employees at the UM
2004	1377
2005	1530
2006	1736
2007	1803
2008	1775
2009	1747
2010	1740
2011	1816
2012	1809
2013	1795
2014	1725
2015	1875
2016	1739
2017	1804
2018	1865
2019	1955
2020	1961
2021	1988
2022	2007
2023	2093

Source: Univerza v Mariboru (2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014a, 2015, 2016, 2017, 2018, 2019, 2020, 2021a, 2022, 2023, 2024)

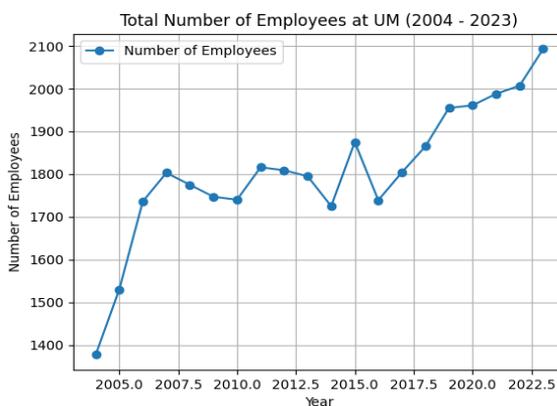


Figure 1: Trend in the number of employees at the University of Maribor from 2004 to 2023

Source: Univerza v Mariboru (2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014a, 2015, 2016, 2017, 2018, 2019, 2020, 2021a, 2022, 2023, 2024)

Between 2004 and 2007, the number of employees grew significantly. In 2004, there were 1,377 employees, and by 2007, this number had increased to 1,803, representing a 31% growth in four years. In 2008, the trend reversed. The number of employees

began to fluctuate and then decline. In 2008, there were 1,775 employees, but by 2014, there were only 1,725. This represents a decrease of approximately 3%. Since 2015, the number of employees has been increasing again. In 2015, there were 1,875 employees, and by 2023, the number had risen to 2,093, representing 11.6% growth over nine years.

The year 2023 represented the peak in the number of employees, with 2,093 people. This is almost 52% more than in 2004 and 21% more than in 2014, when the number of employees was the lowest in the analysis period (Figure 1).

3.2 Employees in the Positions of Higher Education Teachers and Higher Education Associates at the University of Maribor

The following shows the trend in the number of employees in the positions of higher education teacher and higher education associate from 2004 to 2023. The data is presented in five-year periods.

Table 2: Higher education teachers and associates from 2004 to 2008

Title	2004	2005	2006	2007	2008
Librarian	2	4	2	2	2
Professional associate	4	5	11	13	15
Senior professional associate	2	2	2	3	3
Assistant	118	107	110	127	108
Assistant with a master's degree	97	104	107	97	83
Assistant with a doctor's degree	97	103	128	128	141
Lecturer	23	34	30	28	27
Senior lecturer	41	44	49	48	40
Research assistant	15	15	18	20	19
Assistant professor	130	131	127	154	168
Associate professor	128	142	174	172	169
Full professor	106	118	147	142	157
Other	35	125	117	103	108
Total	798	934	1022	1037	1040

Source: Univerza v Mariboru (2005, 2006, 2007, 2008, 2009)

Table 2 shows the numbers of higher education teachers and higher education associates from 2004 to 2008. During this period, the University of Maribor experienced significant growth in the number of highly qualified staff.

The number of assistants with a doctor's degree increased significantly (from 97 to 141), reflecting a greater emphasis on research-qualified staff. The number of assistant professors also increased (from 130 to 168), as did the number of full professors (from 106 to 157). The number of lecturers and senior lecturers, who were mainly teachers in professional higher education programmes, initially increased slightly, but then declined again as a result of the restructuring of study programmes, the strengthening of university programmes and the abandonment of professional higher education programmes. The number of professional associates increased significantly (from 4 to 15), while the number of senior professional associates remained low. The number of research assistants increased slightly (from 15 to 19), while librarians as higher education associates remained low in number (2). The total number of higher education teachers and associates increased from 798 to 1040 between 2004 and 2008. The trend is shown in Figure 2.

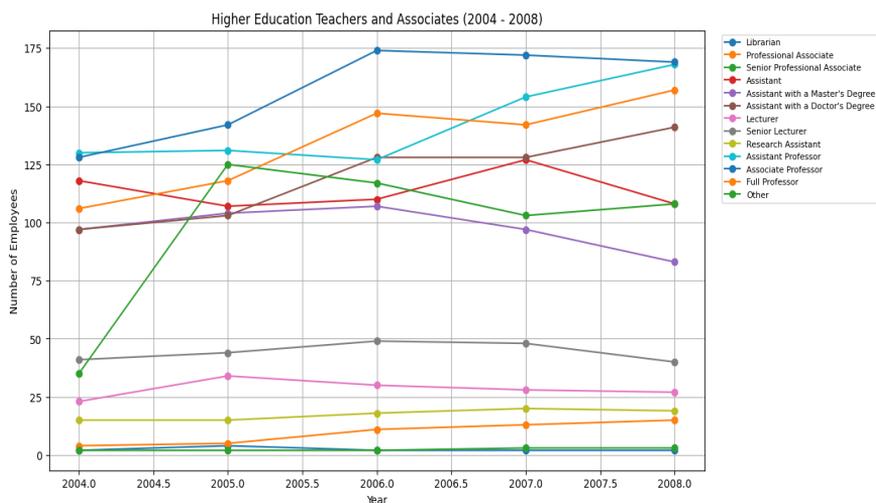


Figure 2: Trend in the number of higher education teachers and associates from 2004 to 2008

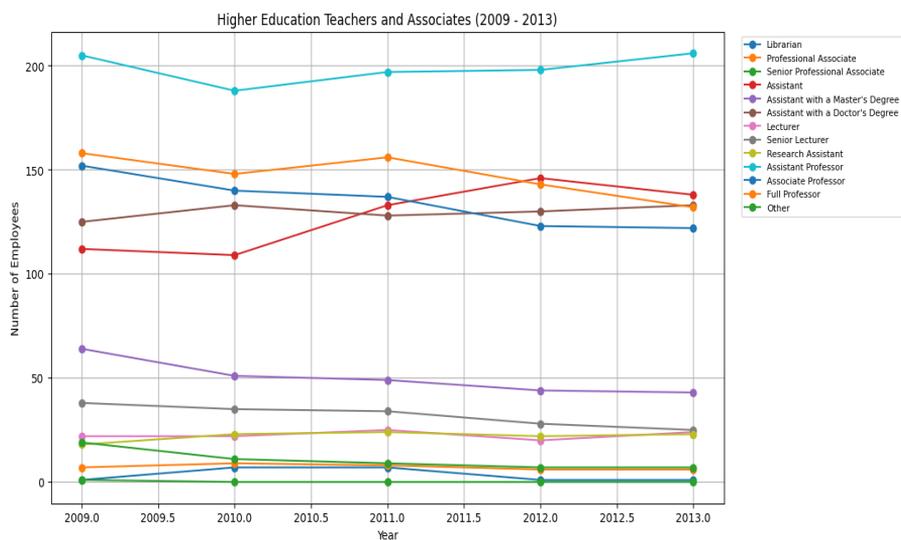
Source: Univerza v Mariboru (2005, 2006, 2007, 2008, 2009)

The period between 2009 and 2013 (Table 3) is marked by a stabilisation in the number of employees, with slight declines in lower titles.

Table 3: Higher education teachers and associates from 2009 to 2013

Title	2009	2010	2011	2012	2013
Librarian	1	7	7	1	1
Professional associate	7	9	8	6	6
Senior professional associate	1	0	0	0	0
Assistant	112	109	133	146	138
Assistant with a master's degree	64	51	49	44	43
Assistant with a doctor's degree	125	133	128	130	133
Lecturer	22	22	25	20	24
Senior lecturer	38	35	34	28	25
Research assistant	18	23	24	22	23
Assistant professor	205	188	197	198	206
Associate professor	152	140	137	123	122
Full professor	158	148	156	143	132
Other	19	11	9	7	7
Total	923	865	907	869	860

Source: Univerza v Mariboru (2010, 2011, 2012, 2013, 2014a)

**Figure 3: Trend in the number of higher education teachers and associates from 2009 to 2013**

Source: Univerza v Mariboru (2010, 2011, 2012, 2013, 2014a)

The number of assistants with a doctor's degree remained almost unchanged (a slight increase from 125 to 133), the number of assistants with a master's degree decreased (from 64 to 43), while the number of assistants without a doctor's or master's degree

fluctuated slightly. The number of assistant professors remained largely stable, while the number of associate professors (from 152 to 122) and full professors (from 158 to 132) declined slightly, which may indicate termination of employment at the university or retirement. Lecturer and senior lecturer positions remained stable, albeit with minor fluctuations. The number of librarians and professional associates remained low. The number of higher education teachers and associates declined slightly over this five-year period, from 923 to 860. The trend is shown in Figure 3.

Table 4 shows the trend in higher education teachers and associates from 2014 to 2018. During this period, the University of Maribor achieved a major shift towards more qualified staff.

Table 4: Higher education teachers and associates from 2014 to 2018

Title	2014	2015	2016	2017	2018
Librarian	1	1	0	0	0
Professional associate	3	3	2	2	3
Senior professional associate	0	0	1	1	1
Assistant	156	130	108	109	100
Assistant with a master's degree	42	30	29	28	25
Assistant with a doctor's degree	132	178	189	187	180
Lecturer	23	20	13	13	12
Senior lecturer	22	27	31	29	33
Research assistant (LD, LM, L)	23	20	19	19	20
Assistant professor	226	184	161	159	158
Associate professor	114	138	149	154	168
Full professor	125	152	177	199	208
Other	4	6	9	8	7
Total	871	889	888	908	915

Source: Univerza v Mariboru (2015, 2016, 2017, 2018, 2019)

The number of assistants without a doctor's degree fell from 156 to 100, while the number of assistants with a doctor's degree peaked (180 in 2018). The number of assistant professors decreased (from 226 to 158), indicating a transition of employees to higher positions, such as associate and full professors. The number of associate professors increased significantly (from 114 to 168), as did the number of full professors, which almost doubled (from 125 to 208), indicating an emphasis on research excellence and teaching skills. The number of other higher education teachers and associates, such as research assistants and professional associates,

remained stable or saw a slight decrease in numbers. Despite minor declines in lower titles, the university is strengthening its academic power through recruitment of higher positions. The number of higher education teachers and associates in this period remained stable with a slight increase (from 871 to 915). The trend is shown in Figure 4. At the national level, the number of higher education teachers also began to rise in 2016 (Bohinc, 2020).

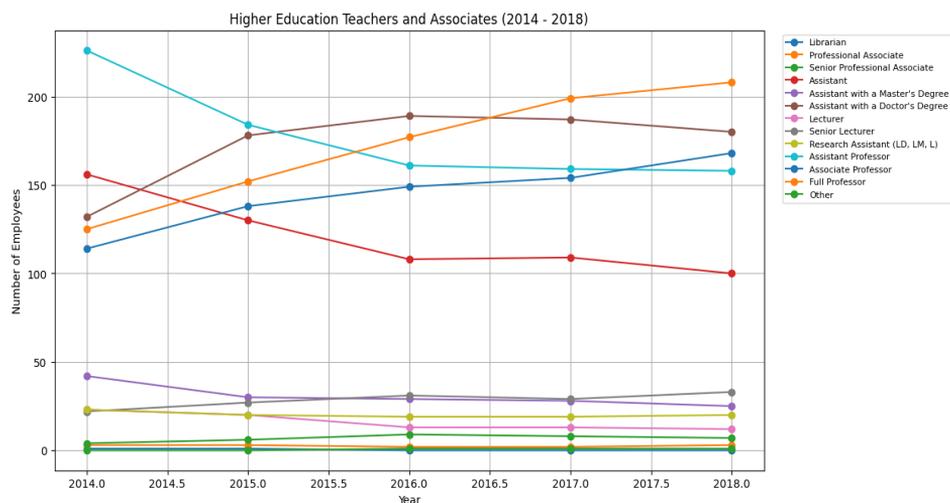


Figure 4: Trend in the number of higher education teachers and associates from 2014 to 2018

Source: Univerza v Mariboru (2015, 2016, 2017, 2018, 2019)

In the recent period (Table 5), restructuring trends have emerged. After peaking in the previous period, the number of assistants with a doctor's degree first declined slightly and then increased again.

The number of assistants increased (from 113 to 134), while the number of assistants with a master's degree continued to decline (from 24 to 14); due to the restructuring of titles and positions, these positions will no longer exist in the future. The number of assistant professors and associate professors has grown slightly, while the number of full professors peaked at 267 in 2023. The number of research assistants has fallen slightly (from 21 to 18), as has the number of senior lecturers (from 32 to 23). The number of librarians remained zero, while professional associates remained stable at very low levels. The growth trend in higher education teachers and associates

continues, with the total number of higher education teachers and associates increasing from 940 to 1004 (Figure 5).

Table 5: Higher education teachers and associates from 2019 to 2023

Title	2019	2020	2021	2022	2023
Librarian	0	0	0	0	0
Professional associate	2	2	2	2	2
Senior professional associate	0	0	0	0	0
Assistant	113	120	130	132	134
Assistant with a master's degree	24	23	18	16	14
Assistant with a doctor's degree	177	167	169	176	187
Lecturer	8	8	11	14	7
Senior lecturer	32	30	30	24	23
Research assistant (LD, LM, L)	21	20	19	19	18
Assistant professor	162	164	162	169	172
Associate professor	172	171	177	169	174
Full professor	222	228	237	249	267
Other	7	7	5	7	6
Total	940	940	960	977	1004

Source: Univerza v Mariboru (2020, 2021a, 2022, 2023, 2024)

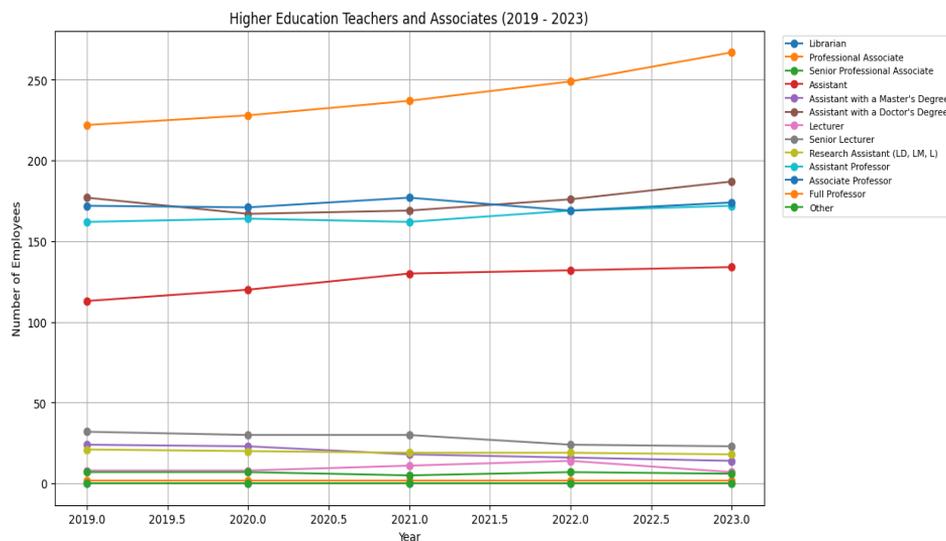


Figure 5: Trend in the number of higher education teachers and associates from 2019 to 2023

Source: Univerza v Mariboru (2020, 2021, 2022, 2023, 2024)

The graph (Figure 6) shows the trends in the number of employees by different groups of higher education teachers and associates between 2004 and 2023. The data shows that, over the years, the University of Maribor has reduced the employment of lower-qualified staff (assistants without a doctor's degree, librarians) and focused on increasing the number of research-qualified and academically higher titles, such as full professors. Research assistant and professional associate positions remain stable, but to a lesser extent. This indicates a clear strategy of the university for achieving academic and research excellence.

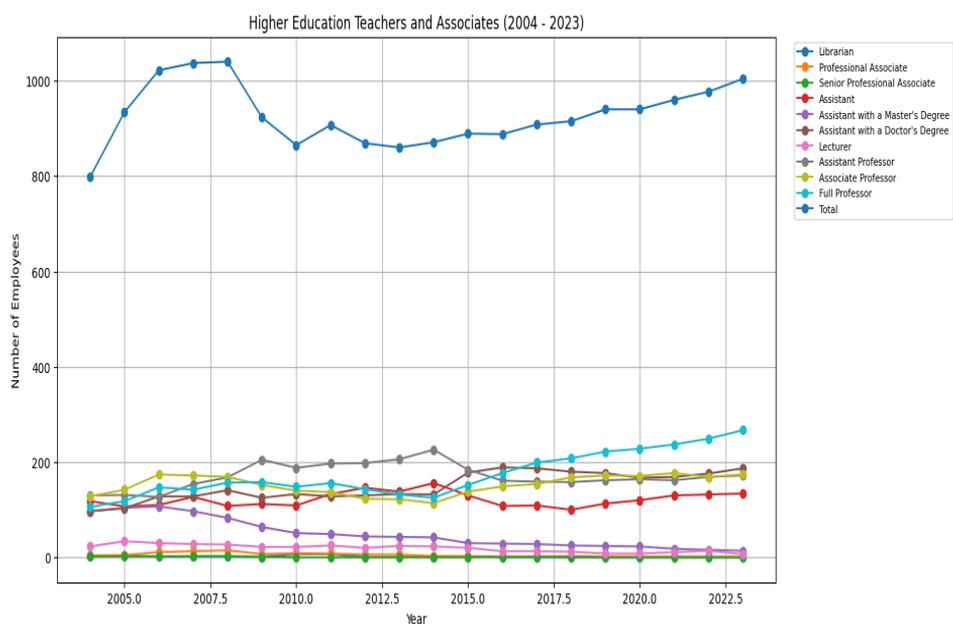


Figure 6: Trend in the number of higher education teachers and associates from 2004 to 2023

Source: Univerza v Mariboru (2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014a, 2015, 2016, 2017, 2018, 2019, 2020, 2021a, 2022, 2023, 2024)

The previous graph (Figure 7) shows the trend in the total number of higher education teachers and associates at the University of Maribor between 2004 and 2023. After initial intensive growth, the number of higher education teachers declined and then rose again.

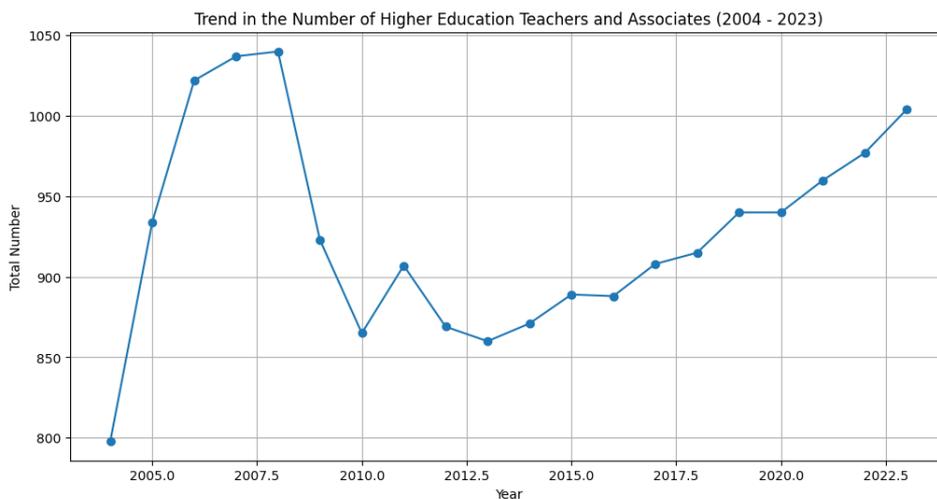


Figure 7: Trend in the total number of higher education teachers and associates from 2004 to 2023

Source: Univerza v Mariboru (2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014a, 2015, 2016, 2017, 2018, 2019, 2020, 2021a, 2022, 2023, 2024)

3.3 Employees in Research and Professional Associate Positions by Pay Grade

Between 2004 and 2008 (Table 6), the total number of employees in group H (researchers and professional associates) increased from 181 to 234. Most employees were in pay grade VII, which applies to researchers. Their number gradually increased, which indicates a growing demand for research staff and the expansion of research work at the University of Maribor, as well as increased efforts to acquire research projects. The number of scientific advisers (pay grade IX) grew significantly during this period, from 2 employees in 2005 to 12 in 2008. On the other hand, the number of researchers with a master's degree (pay grade VIII) declined. The number of employees in lower pay grades, such as laboratory assistants, remained relatively stable, with less pronounced fluctuations between years.

Figure 8 shows the trend in the number of employees in group H positions, which include researchers and professional associates, by pay grade from 2004 to 2023. The data is presented in five-year periods.

Table 6: Researchers and professional associates by pay grade from 2004 to 2008

Pay grade	Workplace	2004	2005	2006	2007	2008
IX	Scientific adviser	No data available.	2	1	2	12
	Scientific associate and Senior scientific associate		3	4	8	12
	Senior researcher		0	20	21	21
	Senior research and development assistant		0	1	0	0
	Senior research and development associate		13	0	0	0
	Independent, senior professional associate		1	0	1	0
	Assistant with a doctor's degree		0	1	0	0
VIII	Researcher with a master's degree (senior, young, independent)		28	21	12	9
VII	Researcher		121	155	157	159
	Professional associate		0	1	0	0
	Assistant	0	0	0	8	
VI	Laboratory assistant (Technical associate)	10	34	23	10	
V	Laboratory assistant	3	2	4	3	
TOTAL		181	240	228	234	

Source: Univerza v Mariboru (2005, 2006, 2007, 2008, 2009)

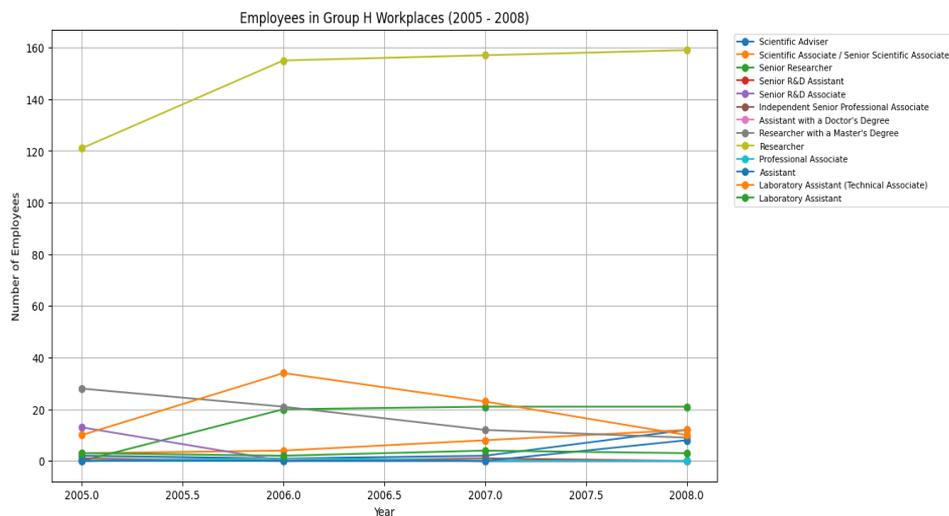


Figure 8: Trend in the number of researchers and professional associates by pay grade from 2005 to 2008

Source: Univerza v Mariboru (2006, 2007, 2008, 2009)

Between 2009 and 2013 (Table 7), the total number of employed researchers and professional associates fluctuated. In 2011, the number of employees in group H positions was the highest in this five-year period, at 244, but then fell to 211 by 2013. During this period, there was a noticeable increase in the number of scientific advisers (pay grade IX) and senior scientific associates. Researchers in pay grade VII/2 remained the largest group of employees in group H positions. Their number remained stable, averaging around 85 per year.

Table 7: Researchers and professional associates by pay grade from 2009 to 2013

Pay grade	Workplace	2009	2010	2011	2012	2013
IX	Scientific adviser	3	3	3	5	7
	Senior scientific associate	0	6	6	4	7
	Scientific associate	9	13	8	9	13
	Senior professional and research associate	0	1	1	1	1
	Assistant with a doctor's degree	37	45	54	47	50
VIII	Researcher with a master's degree (senior, young, independent)	1	0	0	0	0
	Young assistant with a master's degree in doctoral studies	1	0	1	0	0
	Assistant with a master's degree	12	14	8	5	4
	Professional associate with specialisation/master's degree	1	0	0	0	0
VII/2	Researcher (senior, young, independent)	76	68	94	89	90
	Young researcher in a single-cycle doctoral programme	57	66	44	29	17
	Senior developer	0	0	0	0	1
	Assistant and senior assistant	10	21	24	21	21
VII/1	Professional associate	0	1	1	0	0
TOTAL		207	238	244	210	211

Source: Univerza v Mariboru (2010, 2011, 2012, 2013, 2014a)

On the other hand, the number of young researchers enrolled in single-cycle doctoral programmes declined during this period, as shown in Figure 9.

Between 2014 and 2018 (Table 8), the total number of employees increased from 175 to 219. The number of scientific advisers and scientific associates (pay grade IX) increased significantly during this period, indicating a need for highly qualified researchers. Research associates have become one of the largest groups in the highest pay grade. Researchers in pay grade VII/2 remained the largest group of employees, with their number reaching 83 in 2018.

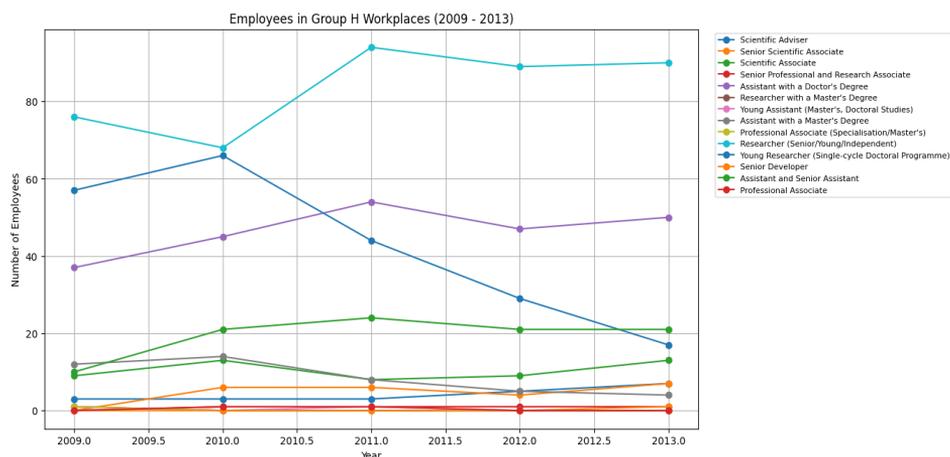


Figure 9: Trend in the number of researchers and professional associates by pay grade from 2009 to 2013

Source: Univerza v Mariboru (2010, 2011, 2012, 2013, 2014a)

Table 8: Researchers and professional associates by pay grade from 2014 to 2018

Pay grade	Workplace	2014	2015	2016	2017	2018
IX	Scientific adviser	4	4	8	8	9
	Senior scientific associate	6	4	4	9	8
	Scientific associate	6	14	16	22	30
	Senior professional and research associate	1	0	0	0	0
	Assistant with a doctor's degree	39	37	31	41	46
VIII	Researcher with a master's degree (senior, young, independent)	0	1	0	0	0
	Assistant with a master's degree	6	3	3	3	4
VII/2	Researcher (senior, young, independent)	74	61	68	73	83
	Young researcher in a single-cycle doctoral programme	11	4	4	5	3
	Developer and senior developer	3	1	1	1	2
	Professional and research assistant	0	0	1	5	3
	Assistant and senior assistant	25	19	22	17	31
VII/1	Professional associate	0	1	1	0	0
Total		175	149	159	184	219

Source: Univerza v Mariboru (2015, 2016, 2017, 2018, 2019)

Nevertheless, the number of young researchers in single-cycle doctoral programmes continued to decline (Figure 10), indicating a continuation of the downward trend in this category, mainly due to the possibilities of obtaining funding for the

employment of young researchers at what was then the Slovenian Research Agency (Sl. Agencija za raziskovalno dejavnosti Republike Slovenije, ARRS).

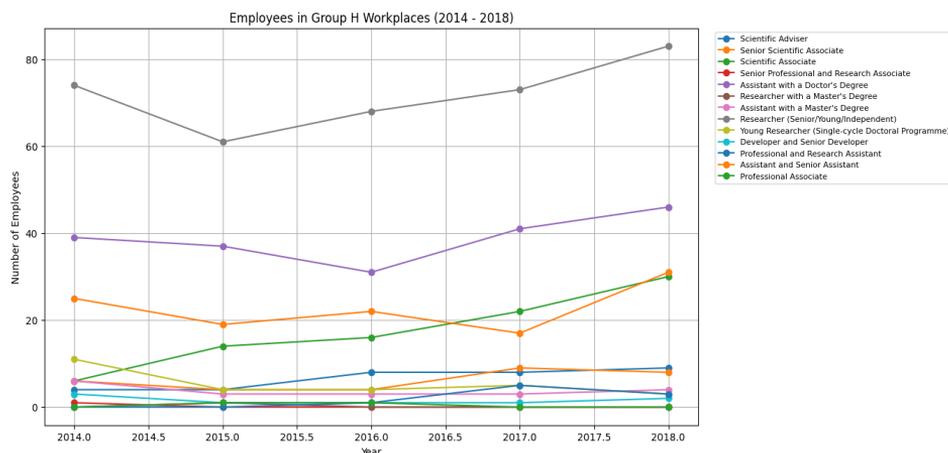


Figure 10: Trend in the number of researchers and professional associates by pay grade from 2014 to 2018

Source: Univerza v Mariboru (2015, 2016, 2017, 2018, 2019)

Table 9: Researchers and professional associates by pay grade from 2019 to 2023

Pay grade	Workplace	2019	2020	2021	2022	2023
IX	Scientific adviser	11	9	11	10	11
	Senior scientific associate	8	7	7	8	12
	Scientific associate	34	36	44	36	51
	Leading professional associate with a doctor's degree	0	0	0	0	2
	Assistant with a doctor's degree	72	51	50	46	44
VIII	Researcher with a master's degree (senior, young, independent)	2	2	3	3	2
	Young researcher in a doctoral programme	0	0	2	0	0
	Assistant with a master's degree	3	1	8	1	1
VII/2	Researcher (senior, young, independent)	117	138	121	108	116
	Young researcher in a single-cycle doctoral programme	1	0	6	0	7
	Developer and senior developer	2	2	1	1	2
	Senior professional and research assistant	4	5	4	4	6
	Assistant and senior assistant	35	38	38	43	48
	Leading professional associate	0	0	1	2	1
Total		289	289	296	262	303

Source: Univerza v Mariboru (2020, 2021a, 2022, 2023, 2024)

The most recent period has seen the largest growth in the number of employed researchers and professional associates (Table 9), reaching 303 in 2023. The largest increase is noticeable among researchers in pay grade VII/2, in which 116 were employed in 2023. This confirms that researchers in this category are the core of research work in group H.

The number of scientific advisers (pay grade IX) remained stable, while the number of scientific associates increased significantly (to 51). Nevertheless, the number of assistants with a doctor's degree declined slightly during this period (Figure 11).

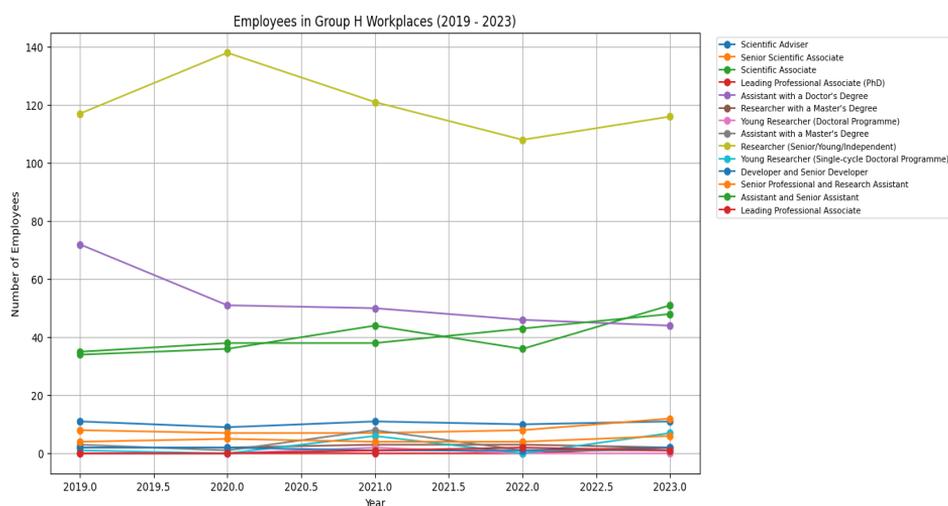


Figure 11: Trend in the number of researchers and professional associates by pay grade from 2019 to 2023

Source: Univerza v Mariboru (2020, 2021a, 2022, 2023, 2024)

Data analysis shows that the number of employees in group H grew steadily between 2004 and 2023, with an emphasis on researchers (pay grade VII/2), who represent the largest share of staff. The graph below (Figure 12) shows trends in the number of employees in group H positions (researchers and professional associates) in the period 2004–2023.

The graph (Figure 12) shows changes in various categories, including scientific associates, researchers, assistants with a doctor's degree, and other related titles. There has been a noticeable increase in highly qualified personnel, such as scientific

advisers, accompanied by a decline in the number of young researchers, indicating a need for new strategies to attract young talent. Group H focuses on the growth and development of research capacities and skilled personnel, reducing the need for lower-skilled positions such as laboratory assistants.

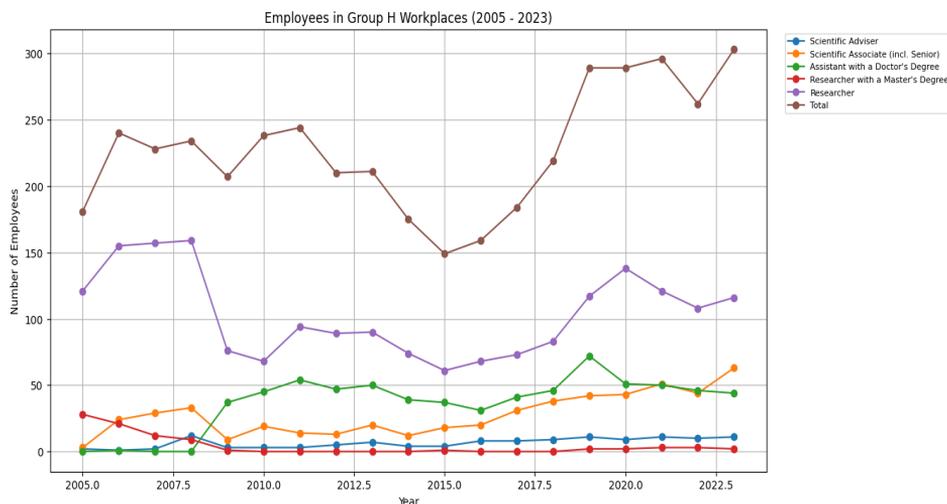


Figure 12: Trend in the total number of employees in group H positions from 2005 to 2023

Source: Univerza v Mariboru (2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014a, 2015, 2016, 2017, 2018, 2019, 2020, 2021a, 2022, 2023, 2024)

3.4 Employees in professional, administrative and other professional and technical positions by pay grade

The following table shows data on employees in accompanying positions in group J (professional associates, administrative workers, and other professional and technical workers), which includes professional associates, administrative workers and other professional and technical workers by pay grade. The data is presented in five-year periods for the years 2004 to 2023.

Table 10 shows the trend in the number of employees in group J positions from 2004 to 2008. During this period, the number of employees increased from 415 in 2005 to 503 in 2007, then decreased slightly to 500 in 2008. The largest number of employees was in pay grade VII, where the number increased from 148 to 239. The

number of employees in the lower pay grades (IV, III, II, I) remained relatively stable, while pay grade VI peaked in 2005 with 193 employees.

Table 10: Employees in group J positions by pay grade from 2004 to 2008

Pay grade	2004	2005	2006	2007	2008
IX	No data available.	5	0	0	0
VIII		12	2	2	2
VII		148	200	234	239
VI		80	193	95	98
V		111	99	105	94
IV		31	40	35	36
III		12	12	14	13
II		11	12	12	13
I		5	6	9	5
Total		415	474	503	500

Source: Univerza v Mariboru (2005, 2006, 2007, 2008, 2009)

Figure 13 shows a steady increase in the number of employees in pay grade VII and a sharp decline in the number of employees in pay grade VI in 2005.

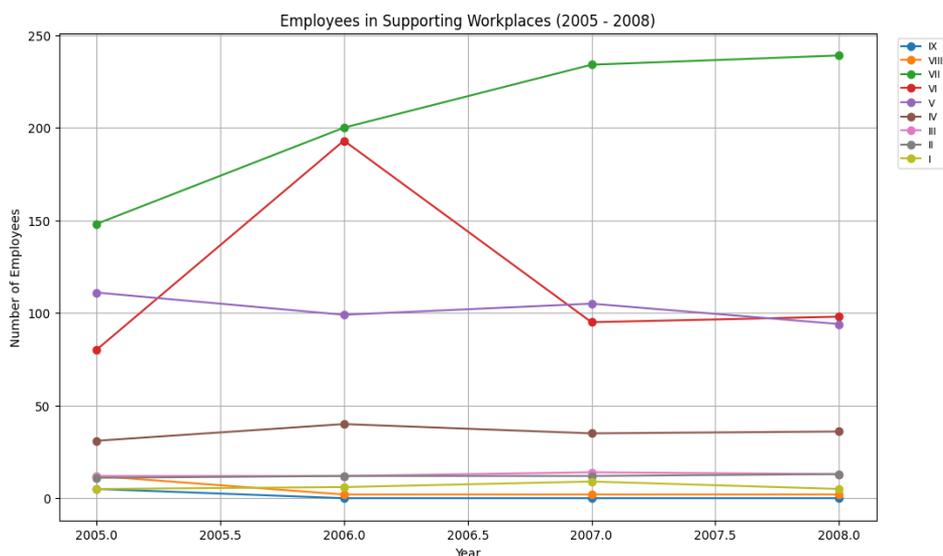


Figure 13: Trend in the number of employees in group J positions by pay grade from 2004 to 2008

Source: Univerza v Mariboru (2005, 2006, 2007, 2008, 2009)

The number of employees peaked in 2012 with 710 employees (Table 11) in the period from 2009 to 2013, which is a result of the introduction of a new pay system and the distribution of technical staff and laboratory assistants among employees in pay group J. The largest share was represented by employees in pay grade VII/2, in which the number rose to 271 in 2012.

Table 11: Employees in group J positions by pay grade from 2009 to 2013

Pay grade	2009	2010	2011	2012	2013
VII/2	244	251	270	271	266
VII/1	93	103	122	131	135
VI	122	105	114	108	107
V	107	97	90	90	82
IV	30	31	31	24	24
III	11	10	11	10	10
II	9	8	8	76	82
I	0	0	0	0	0
Total	616	605	646	710	706

Source: Univerza v Mariboru (2010, 2011, 2012, 2013, 2014a)

An increase is also noticeable in pay grade VII/1, while the number of employees in pay grades VI and V began to decline. In pay grade II, there was a sudden increase in 2013, indicating additional employment in support roles (Figure 14).

Table 12: Employees in group J positions by pay grade from 2014 to 2018

Pay grade	2014	2015	2016	2017	2018
VII/2	255	277	290	313	326
VII/1	123	124	124	125	128
VI	95	79	76	74	71
V	81	77	73	69	76
IV	20	23	24	25	19
III	3	3	3	3	3
II	80	79	82	82	85
I	0	0	0	0	0
Total	657	662	672	691	708

Source: Univerza v Mariboru (2015, 2016, 2017, 2018, 2019)

Table 12 shows the trend in the number of employees in group J positions from 2014 to 2018. The number of employees gradually increased during this period, from 657 in 2014 to 708 in 2018.

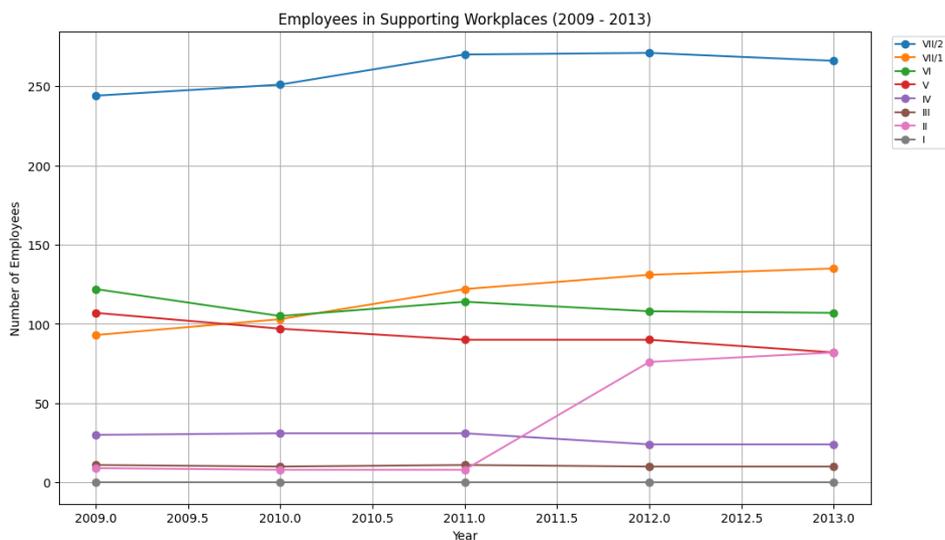


Figure 14: Trend in the number of employees in group J positions by pay grade from 2009 to 2013

Source: Univerza v Mariboru (2010, 2011, 2012, 2013, 2014a)

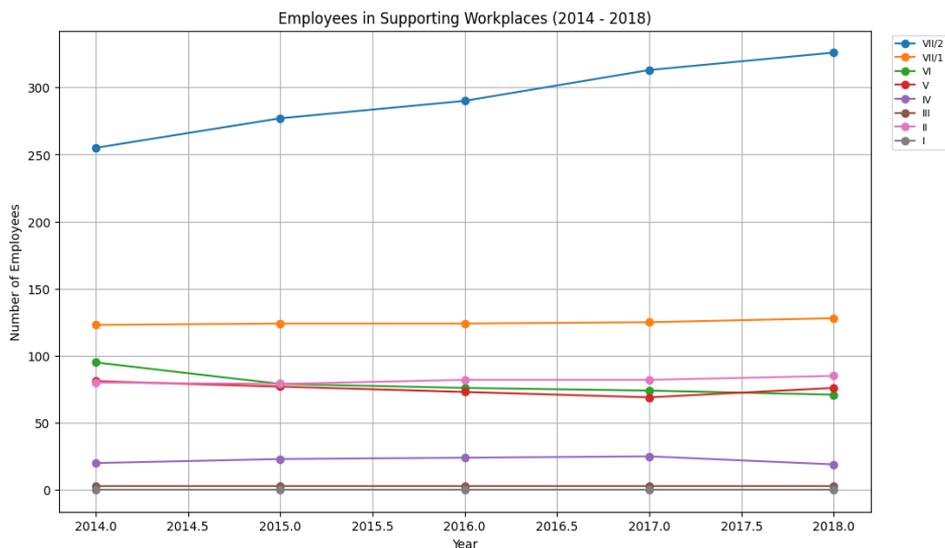


Figure 15: Trend in the number of employees in group J positions by pay grade from 2014 to 2018

Source: Univerza v Mariboru (2015, 2016, 2017, 2018, 2019)

Pay grade VII/2 remained the most numerous, increasing to 326 employees in 2018. Lower pay grades (III and IV) remained under-represented. Pay grades VI and V recorded a further decline, indicating a shift towards more qualified positions (Figure 15).

In the most recent period (Table 13), the number of employees in group J positions reached a new peak in 2023 with 777 employees.

Table 13: Employees in group J positions by pay grade from 2019 to 2023

Pay grade	2019	2020	2021	2022	2023
VII/2	330	356	360	390	431
VII/1	121	111	116	135	126
VI	62	62	58	52	52
V	83	78	76	71	69
IV	26	24	21	20	20
III	3	1	1	1	2
II	77	78	77	79	77
I	0	0	0	0	0
Total	702	710	709	748	777

Source: Univerza v Mariboru (2020, 2021a, 2022, 2023, 2024)

Pay grade VII/2 continued to grow, reaching 431 employees, which indicates growth in professional staff in higher job grades. Pay grade VII/1 remained stable, while pay grades VI and V continued to decline. Pay grade II remained stable, indicating a steady demand for support positions (Figure 16).

Data on employees in group J positions, which include professional associates, administrative workers and other professional technical workers, shows a clear trend toward professionalisation of the workforce in group J, with an increase in the number of employees in higher pay grades (VII/2 and VII/1) and a decrease in lower pay grades (VI, V, IV). In support positions at the University of Maribor, there is a clear focus on increasing the professionalism and responsibility of employees, which indicates a transition to more structured and demanding work tasks. There has also been an increase in the educational structure, which was influenced by the decision of the Management Board of the University of Maribor to offer employees in pay group J positions the opportunity to obtain higher education free of charge through study programmes at the University of Maribor.

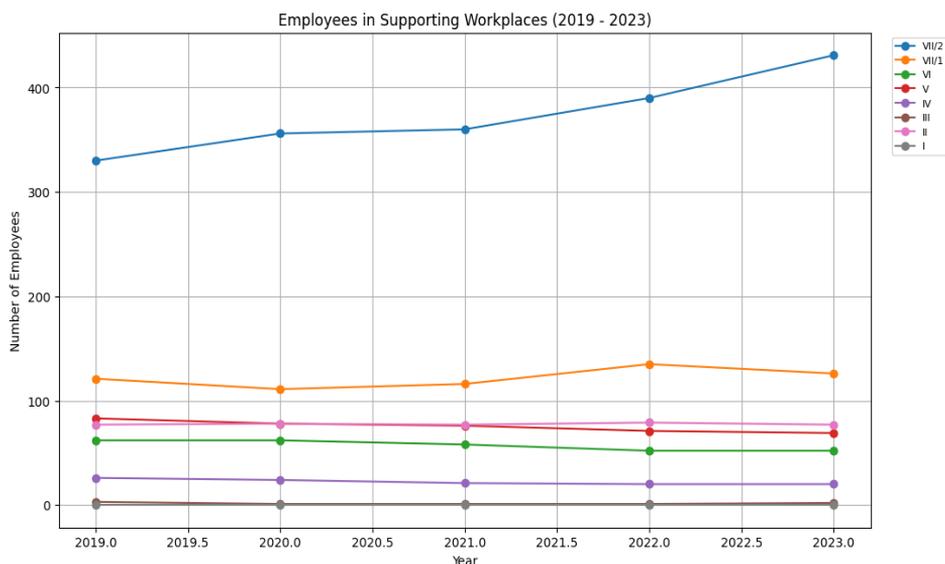


Figure 16: Trend in the number of employees in group J positions by pay grade from 2019 to 2023

Source: Univerza v Mariboru (2020, 2021a, 2022, 2023, 2024)

The increase in the number of employees in pay grade J was also a result of the University of Maribor taking on new tasks, for which employees in pay grade J were hired for individual tenders, such as the establishment of a career centre, a technology transfer office, and a project office.

4 Human Resource Development at the University of Maribor Today

Today, the University of Maribor offers a range of opportunities for staff development. In addition to ways of developing individual talents and encouraging critical thinking, it provides a stimulating and innovative environment for teaching, research, and high-quality service delivery (Univerza v Mariboru, n.d.). The University of Maribor organises numerous workshops and training courses for all employees within the framework of the Department for Quality and Sustainable Development of the University of Maribor. The University of Maribor offers Enhance UM educational programmes, which are mostly conducted by higher education teachers and associates at the University of Maribor. The training courses cover eight content areas, namely learning and teaching, research, leadership and

management, quality development, soft skills development, improvement of professional skills, internationalisation and knowledge transfer to the environment. The purpose of these training courses is to follow the strategy of the University of Maribor and improve not only the quality of the work of employees, but also to follow the development of individual competencies (Majcen, 2016).

Staff development follows the University of Maribor Strategy 2021–2030, which emphasises the importance of caring for interpersonal relationships and a creative working environment for employees and their well-being at work. The University of Maribor Strategy 2021–2030 encourages employees in their research, teaching and professional work and strives to achieve the following goals (Univerza v Mariboru, 2021b):

- an open, transparent, and performance-based approach to employment that will strengthen the reputation of the University of Maribor as an employer in the domestic and international environment;
- promoting interdisciplinary cooperation and networking among teaching, research and professional staff, and strengthening good interpersonal relationships, a culture of dialogue, respect for personal circumstances and intergenerational connectedness;
- implementing the principle of non-discrimination on the basis of all internationally and constitutionally recognised personal circumstances by increasing the accessibility of the university to persons with disabilities and persons with functional limitations;
- strengthening employee training and assisting in their career development;
- ensuring an appropriate work-life balance, strengthening health, social security and employment stability;
- compliance with internationally recognised standards of professional ethics to establish a work culture in which employees are encouraged to strive for excellence and to enthusiastically implement the strategy of the University of Maribor.

The University of Maribor Strategy 2021–2030 highlights in its objectives the provision of equal opportunities for all employees, the promotion of their career development, and the provision of a work-life balance in accordance with international ethical standards. In 2022, the Resolution on the National Programme

of Higher Education to 2030 (“Resolucija o nacionalnem programu visokega šolstva do 2030 (ReNPVŠ30)”, 2022) was adopted. This envisages two main measures in the field of human resources: promoting a system of internationally open human resources policy or promoting systematic human resources strengthening of higher education institutions, as well as ensuring attractive research conditions, which is also an obligation for the University of Maribor to follow.

5 Conclusion

The analysis of personnel data shows that the University of Maribor has continuously focused on employee development over time. Despite constant social changes that have affected the development of the University of Maribor, the trend of employee development has continued.

Human resource development in Slovenia and around the world is currently undergoing a transition process, with individual sub-processes being automated and adapted to operate in a global environment. The University of Maribor is following this development and successfully integrating modern digital technologies and the green transition into the employee development process. Their use enables the growth of both the professional and the personal development of employees.

The extremely rapid development of digital technology around the world will lead to new approaches to human resource development in organisations in the future. The most prominent will be knowledge and skills in the areas of digital literacy, critical thinking and innovation, and the green transition. Due to constant changes in the environment, lifelong learning will become an integral part of an individual's life. The University of Maribor is already taking a strategic approach to these challenges and incorporating new didactic approaches and forms of lifelong learning as an integral part of the development of its employees. It is also actively involved in the process of developing micro-credentials. In doing so, it goes beyond the framework of established staff development, as it enables its employees to be active and responsible members of society who are able to think outside the box and thus contribute to the development of society as a whole.

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DEVELOPMENT OF EDUCATIONAL ACTIVITY AT THE UNIVERSITY OF MARIBOR

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The educational activity currently carried out by the University of Maribor has its roots in higher vocational and higher education, which began at the institutions that would later become its constituent members, approximately a decade and a half prior to the University's formal establishment. The development of study programmes was initially guided by the needs of the local community, gradually expanding to address broader economic and societal demands. Following the founding of the University, the range of study programmes and fields of study expanded rapidly, particularly through the establishment or integration of new faculties. At present, the University of Maribor comprises seventeen members, collectively offering 178 study programmes across all levels of higher education in the fields of engineering, natural sciences, agriculture, medicine, social sciences, and the humanities. A diverse and comprehensive selection of study programmes, their continual adaptation to societal needs, an interdisciplinary orientation, a strong commitment to internationalisation, and a consistent rate of student enrolment are key features of its academic engagement. These attributes position the University of Maribor as a significant national higher education institution, which has long since transcended its local and regional origins and now confidently asserts its presence within the global academic sphere.

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1 Introduction

There is probably no area of activity that is as characteristic of a university as education. Although today there are no universities without research activities, historically speaking, the primary focus has always been on the transfer and acquisition of knowledge, i.e., the relationship between teacher and pupil or professor and student. This undoubtedly also applies to the University of Maribor, as many higher education institutions were already implementing their study programmes long before the university was founded or before they became part of it.

Since the development of study programmes at the time of the university's establishment was mainly a matter of continuity, our story of the educational activities of the University of Maribor dates back to the late 1950s, when tertiary education began to emerge in Maribor and Kranj. The main part of the chapter presents the development of educational activities after the establishment of the university, i.e., during the operation of the individual faculties after their incorporation into the university. Faculty representatives¹ provided brief accounts of the beginnings, development and milestones of their educational activities, and the chapter coordinators attempted to compile them into a coherent whole. The concluding part also contains a list of all currently existing study programmes and some of the most relevant statistical data relating to education. The data covers the last ten years, when study programmes were well developed even at the newest members of the University of Maribor.

2 The Beginnings of Tertiary Study Programmes Before the Establishment of the University of Maribor

In the decade and a half prior to the establishment of the University of Maribor in 1975, junior college and later college study programmes began to develop almost simultaneously at educational institutions that later merged into a university. Junior

¹ Representatives of the faculties who prepared an overview of educational activities by faculty: Aleksandra Pisnik (EPF UM), Boštjan Vlaovič (FERI UM), Sebastijan Seme and Jurij Avsec (FE UM), Marko Jaušovec (FGPA UM), Samo Korpar (FKKT UM), Anastazija Gselman (FKBV UM), Matevž Obrecht (FL UM), Marko Jakovac (FNM UM), Polona Šprajc (FOV UM), Matej Zadavec (FS UM), Barbara Pavlakovič Farrell (FT UM), Andrej Sotlar and Maja Modic (FVV UM), Klavdija Čuček Trifkovič (FZV UM), Alja Lipavc Oštir and Joca Zurec (FF UM), Radovan Hojs (MF UM), Črtomir Matejek (PEF UM), Darja Senčur Peček (PF UM). We would like to express our sincere gratitude to them for their contribution, and we are also grateful to the professional services of the members and the rectorate of the University of Maribor for their assistance.

colleges and colleges and their study programmes were created in response to the needs of the economy and social activities in the local and wider Slovenian area, in accordance with what was then the legislation in the field of tertiary education in Slovenia.

Thus, at the initiative of Maribor's economic organizations and professional associations, the Junior Technical College was established in 1959 (its present-day successors are the Faculty of Mechanical Engineering, Faculty of Electrical Engineering and Computer Science, Faculty of Chemistry and Chemical Engineering, and Faculty of Civil Engineering, Transportation Engineering and Architecture), as Maribor was the most developed industrial centre in Slovenia at the time, and there was a great need for staff with higher education. The junior college, located in this industrial environment, was able to meet the great demand for personnel in the easiest and fastest way, while the developed industry helped the school with highly qualified and scientific staff who had rich practical experience. In 1973, it was transformed into the Technical College in Maribor, which enabled the introduction of higher education study programmes for the education of graduate engineers and the organization of postgraduate studies, as well as the right to award master's and doctor's degrees in technical sciences. In 1975, employees and students adopted decisions on the organization of four basic higher education organizations of associated labour of the Technical College of the University of Maribor, which operated in the fields of mechanical engineering, electrical engineering, civil engineering, and chemical engineering (Prebevšek, 2021).

In 1959, the Junior College of Commerce in Maribor (today the Faculty of Economics and Business) also began its journey. Originally, there were two departments within the school – foreign trade and industry, but later there were four: foreign trade, general commerce, accounting and finance, and banking. In 1962, the school was renamed the Junior College of Economics and Commerce (Višja ekonomsko-komercialna šola – VEKŠ). Study activities expanded rapidly, with the establishment of the Department of Tourism and Hospitality (1960/61) and the Department of Transport and Insurance (1961/62). An important milestone was the establishment of the College of Economics and Commerce in 1969, which, in addition to junior college study programmes (economics and commerce), also introduced college programmes (economics and finance, and technical economics). In 1971/72, the faculty introduced a postgraduate study programme in marketing and finance, although it should be noted that the beginnings of postgraduate study

date back to 1963 (postgraduate study for economists, which took the form of seminars). In 1974, a new curriculum was adopted, which allowed for a uniform first year and specialisation in subsequent years. This organization was more flexible and allowed students to make a thoughtful choice of orientation, while at the same time ensuring a more rational implementation of the educational process (Bastič, 2009).

In 1959, the Junior College of Personnel and Social Studies (today the Faculty of Organizational Sciences) was established in Kranj as part of the Institute for Personnel Education and Work Organization Studies. The school was initially intended for management personnel, and education took the form of several full-day seminars. The following year, it became a nationwide junior college for human resources personnel. In 1963, the school developed an organizational course and a course of occupational safety. In 1965, it was renamed the Junior College of Work Organization. New study programmes were developed, along with new methods and techniques of teaching. The school also attracted considerable interest in other republics of the former Yugoslavia. During preparations for the transition from junior college to college in the 1970s, development focused on the study of organizational sciences (computer science, industrial pedagogy and interdisciplinary programme development). From the very beginning of its development, organizational sciences, unlike other sciences within business and administrative sciences, focused on relationships within organizations. In 1974, the junior college was transformed into the College of Work Organization (Podlogar & Zupan, 2009).

In 1960, a two-year Junior College of Agronomy (today the Faculty of Agriculture and Life Sciences) was established. For the first ten years, it trained agricultural engineers (experts in the transfer of applied and developmental findings into practice) in the fields of pomology, viticulture, arable farming and animal husbandry. Students attended classes on a full-time or part-time basis. In the early years, there were 30 percent more part-time than full-time students. Except for Maribor, lectures were also organized in several other cities across Slovenia, in cooperation with workers' universities and some agricultural schools. Over the course of a decade, the Junior College of Agronomy adapted to the needs of society and the development of agriculture. It was the first in the former Yugoslavia to recognise the need for adjustments, so in the academic year 1971/72, it introduced a study programme focused on agricultural promotion (consulting). Due to the rapid development of agricultural mechanisation and the modernisation of agriculture, in the following academic year 1972/73, the school also accredited an interdisciplinary study

programme in agricultural engineering, which was implemented by staff from the Junior College of Agronomy and the Department of Engineering of what was then the Technical College (Nemec & Turk, 2005).

In 1960, the Junior College of Law (today's Faculty of Law) also began its education activities. The first lectures were held on 17 October of the same year, specifically for part-time students. On 29 September 1962, the first graduates of the two-year law programme in Maribor received their diplomas. The first decades of the operation of the Junior College of Law were marked by several unsuccessful attempts to transform it into a College of Law. This finally happened in 1990, but even earlier (in 1975), the Junior College of Law signed a self-management agreement on merging with the University of Maribor (Ivanjko et al., 2010).

In 1961, the four-year Pedagogical Academy (now the Faculty of Education, the Faculty of Arts, and the Faculty of Natural Sciences and Mathematics) was established, which initially educated students through junior college programmes and, when the need arose, through college study programmes. This gave the Pedagogical Academy the character of a specialised higher education institution with two-cycle education. This was an extraordinary event at the time, as the city of Maribor, with its five junior colleges, also gained its first college that trained staff for the needs of preschool, primary, and later also secondary education. As early as the 1960s, it was possible to study in Maribor within the framework of numerous subject groups, such as primary school teaching, Slovenian and Serbo-Croatian, German and Slovenian, English and Slovenian, mathematics and physics, technical education and physics, art education in connection with one of the subjects from other subject groups, music, geography and history, biology and chemistry, physical education, etc. (Bračič, 2011).

3 Development of Educational Activities of the Members of the University of Maribor – Study Programmes, Milestones, Internationalisation, Special Features

After the establishment of the University of Maribor, which was formed in 1975 by the merger of six junior colleges and colleges, there was a noticeable acceleration in the comprehensive development of its members and their study programmes. The 1980s and 1990s were marked by the transformation of colleges into faculties, while the period after 2000 saw the implementation of the principles of the Bologna

Declaration and a significant increase in the range of study programmes with the establishment or affiliation of new members of the university. The establishment of seven faculties through the separation of two faculties that were founding members of the university also brought a certain dynamic to this process. Thus, in 1995, four faculties were created from the Faculty of Technology, and in 2006, three independent faculties were created through the transformation of the Faculty of Education.

The following is a summary of the development of educational activities in accordance with the current alphabetical order of the members of the University of Maribor. At the end of each subchapter, there is also a list of sources that were mainly used by faculty representatives and chapter coordinators.

3.1 Faculty of Economics and Business, University of Maribor (EPF UM)

After becoming part of the university, the college developed in the direction of economic-commercial and economic-organizational sciences, and individual departments were established accordingly. In 1989, the college was reorganized and renamed the Faculty of Economics and Business. The following year, it introduced an MBA programme with two modules (General Management and Fundamentals of Functional Management) and four elective modules. The programme obtained ECBE international accreditation and enabled international student exchanges. A major change in the study programmes of the regular undergraduate study programme was implemented in 1991, when an integrated higher education study programme with seven fields of study was introduced for graduate economists: banking and finance, economics, marketing, international trade, entrepreneurship, business informatics and business organization. Between 1991 and 1998, several TEMPUS projects were carried out at the EPF UM, connecting the faculty with important university partners in Germany, Belgium, Sweden, Austria, and Italy. These connections led to the creation of an extremely successful study programme in Small and Medium-Sized Enterprise Management (the first of its kind in Slovenia), which was later renamed Entrepreneurship (Bastič, 2009).

The next major overhaul of study programmes took place in 1996, when the university study programme in Economics, the professional higher education study programme in Business Economics and the interdisciplinary university study

programme in Economic Engineering (GING) were accredited, which EPF UM implemented together with the Faculty of Mechanical Engineering UM, the Faculty of Electrical Engineering and Computer Science UM, and the Faculty of Civil Engineering UM (now the Faculty of Civil Engineering, Transportation Engineering and Architecture UM). This study programme was the first of its kind in Slovenia. In 1998/99, the faculty strengthened its international cooperation with the Danish Esbjerg Business Academy and concluded agreements with 10 European universities within the framework of the Socrates-Erasmus programme. This enabled students to study and do internships abroad and participate in international educational cycles.

In the 21st century, the faculty further strengthened its international cooperation, innovated its study programmes and obtained international accreditations. In 2006/07, the first generation of students enrolled in Bologna 1st and 2nd cycle study programmes, and a year later, studies began at the renewed 3rd cycle. With the Bologna reform, the interdisciplinary study programme GING also gained a second and later a third cycle (Hauptman & Oplotnik, 2019). Later, the doctoral study programme in Economics and Business Sciences was renovated into a study programme with an individual research focus, which students have been enrolling in since the academic year 2019/20. In the first cycle of study, the EBS (Economic and Business Studies) programme has been introduced, which is offered as a part-time study programme, taught exclusively in English, and consists of three modules. In the second cycle, two new programmes have been introduced, which are offered as part-time programmes and only in English: Economic and Business Studies and Data Science in Business.

The faculty currently offers programmes across the entire vertical spectrum, namely:

- first-cycle professional higher education study programme in Business Economics;
- first-cycle university study programme in Economics and Business Sciences;
- second-cycle study programme in Economics and Business Sciences; and
- third-cycle study programme in Economics and Business Sciences.

The EPF UM study programmes are internationally comparable and modern. Since 2009, the first- and second-cycle programmes have been internationally accredited by the ACBSP (Accreditation Council for Business Schools and Programs), and in

2018, the faculty also obtained international accreditation from one of the most prestigious accreditation associations, AACSB (The Association to Advance Collegiate Schools of Business). Less than 6 percent of all business programmes in the world have this accreditation.

When it comes to student support, it is worth mentioning that a Career Centre was established at the faculty in 2005, which connects graduates with employers and supports students in developing their careers. In the academic year 2006/07, the faculty was among the first at the University of Maribor to introduce a tutoring office with the aim of facilitating the transition and simplifying access to important information about the study process (Bastič, 2009). In 2023/24, the tutoring system was renewed; now, in addition to a large group of student tutors, it also includes teacher tutors and an OK point – an office providing comprehensive assistance to students.

3.2 Faculty of Electrical Engineering and Computer Science, University of Maribor (FERI UM)

While still part of the Technical College (which was transformed into the Faculty of Technology in 1985), a university programme in Electrical Engineering was introduced in 1975, followed by a postgraduate programme in 1977. In 1984, a study programme in the field of computer science and informatics was introduced. In the academic year 1993/94, an interdisciplinary study programme in economic engineering for the field of electrical engineering was also launched (together with EPF UM, FGPA UM, and FS UM). After the Faculty of Technology was divided into four independent faculties in 1995, FERI UM began the academic year 1996/97 with two professional higher education study programmes (Electrical Engineering and Computer Science and Informatics) and three university study programmes (Electrical Engineering, Computer Science and Informatics, and Industrial Engineering). These programmes were later joined by the university study programmes Telecommunications (2001/02) and Media Communications (2002/03) (Prebevšek, 2021).

In the process of reforming study programmes in accordance with the Bologna Declaration, the existing undergraduate university and higher education study programmes in Computer Science and Informatics were transformed into independent first-cycle study programmes in Computer Science and Information

Technology and Informatics and Communication Technologies. Mechatronics, one of the branches of the university study programme in Electrical Engineering, was transformed into an independent interdisciplinary study programme, which is carried out by FERI UM in cooperation with FS UM. First-cycle study programmes began in the academic year 2007/08, second-cycle programmes in the academic year 2010/11, and the renewed doctoral programme (third cycle) was first announced in the academic year 2009/10 (Prebevšek, 2021).

FERI UM study programmes enable students to acquire basic knowledge and relevant professional competences, which provide graduates with broad employment opportunities at home and abroad. First-cycle study programmes include compulsory practical training in industry, which enables students to acquire the necessary knowledge to independently solve practical problems in the field. In the second and, above all, third cycle, students can participate in basic and applied research conducted by internationally recognised researchers at the faculty. Students can enrol in professional higher education study programmes, which are somewhat more practice-oriented and geared towards early employment, or in university study programmes, which are internationally comparable and structured towards continuing studies in the 2nd and 3rd cycles. Regardless of the type of study, the content of the study programmes covers the most relevant disciplines of contemporary technological development in the fields of electrical engineering, computer science and informatics, media communications, telecommunications, and mechatronics. The faculty is aware of the importance of close cooperation with the economy and industry, which is why it organizes annual working meetings of programme councils at which it learns about the development directions of employers and their expectations regarding the professional competences of FERI UM graduates.

The faculty is also closely integrated into the wider European academic space through a multitude of student exchanges and teaching staff visits. The first mobility programmes at the faculty took place in the academic year 1999/00. Eight students came to FERI UM, and 19 students went on exchange. The first teaching mobilities were also carried out – eight teachers went on mobility, and five came to FERI UM. Currently, the faculty accepts more than 150 foreign students each year, and around 50 students go on exchange. In 2009, the FERI UM Alumni Club was established, the purpose of which is to maintain contact with former students, alumni, even after they have completed their studies. Such networking facilitates the creation and

implementation of various activities, from co-mentoring in final theses to applied research projects, etc. (Prebevšek, 2021).

With 2,360 enrolled students and 338 employees, FERI UM is the largest faculty at the University of Maribor. During its existence and operation, the faculty has educated 12,140 graduates, 380 masters of science, and 358 doctors of science.

3.3 Faculty of Energy Technology, University of Maribor (FE UM)

The Faculty of Energy Technology is the second newest faculty at the University of Maribor. It was established in 2007 and is the only new public technical faculty in Slovenia in recent decades. The faculty is based in Krško and has a permanent branch in Velenje. The locations were not chosen at random; they are the largest energy hubs in Slovenia. This gives students direct contact with large energy systems, which is an additional advantage in teaching and research work. Students acquire in-depth knowledge in a wide range of energy fields, namely in the areas of energy efficiency, conversion of various forms of energy into electrical energy, energy transmission, distribution, and transformation, alternative energy technologies and other related fields. With an individual approach to students and state-of-the-art laboratories at the faculty, they create the right conditions for high-quality study and prepare graduates for the challenges that the future of energy will bring. All study programmes are aligned with the Bologna process, which allows for a high degree of choice. As part of the study programme, students can choose to complete some of their study obligations in the fields of hydropower, thermal power, nuclear power, renewable energy sources, alternative energy and general energy (Univerza v Mariboru, Fakulteta za energetiko, 2024).

The faculty began offering first- and second-cycle study programmes in the academic year 2008/09 and third-cycle study programmes in the academic year 2012/13. Major changes to the first two cycles study programmes were made in the academic years 2018/19 and 2024/25, while major changes to the third-cycle study programme were made in the academic year 2019/20, when it also became a member of the Doctoral School Council of the University of Maribor. As of 2024, the study programmes of the first two cycles are entered in the EEED (European Engineering Education Database) (Univerza v Mariboru, Fakulteta za energetiko, 2024).

The faculty offers a complete vertical study programme, namely:

- first-cycle professional higher education study programme in Energy;
- first-cycle university study programme in Energy;
- second-cycle study programme in Energy; and
- third-cycle study programme in Energy.

The professional higher education and master's study programmes are offered as full-time and part-time programmes, the university programme as a full-time programme, and the doctoral programme as a part-time programme.

The faculty has concluded numerous Erasmus+ and other inter-institutional agreements, which enable extensive international cooperation in various fields with numerous universities around the world, including institutions from Austria, the Czech Republic, Croatia, Germany, Poland, Romania, Spain, North Macedonia, Serbia, Turkey, and China. Cooperation includes guest lectures, research collaboration, and exchanges of university teachers and researchers (Univerza v Mariboru, Fakulteta za energetiko, 2024).

Since the start of the study programmes in all three cycles (in all years), more than 4,000 students have been enrolled at FE UM (of which 80 per cent are enrolled in the first-cycle study programmes, 17 per cent in the second-cycle study programme and 3 per cent in the third-cycle study programme), around 200 per year in recent years, and more than 550 students have already completed their studies. According to data from the Employment Service of Slovenia, it can be concluded that the employability of graduates is over 99 per cent (Univerza v Mariboru, Fakulteta za energetiko, 2024).

3.4 Faculty of Civil Engineering, Transportation Engineering and Architecture, University of Maribor (FGPA UM)

The study programmes of today's FGPA UM continue and upgrade the study content that was already available to students in Maribor during the operation of the Junior Technical College, the Technical College and the Faculty of Technology, which was established in 1985 (Prebevšek, 2021). During this period, new laboratories and research centres were established, enabling practical exercises and the integration of the academic and industrial sectors. In addition, the faculty began

to involve students more intensively in research projects and innovation initiatives, which increased the quality of the educational process and stimulated the development of new technologies in the fields of civil engineering, transport engineering and architecture.

The Faculty of Civil Engineering was established as an independent member of the University of Maribor in 1995 (Prebevšek, 2021). This enabled greater autonomy in the development of study programmes and research activities in the field of civil engineering, as well as easier adaptation to the needs of industry, greater flexibility in the introduction of new research programmes, and the strengthening of connections with the economy and the wider academic community. In 2012, the Department of Civil Engineering, the Department of Transportation Engineering, and the Department of Architecture were established at the faculty, and in 2015, the faculty confirmed this organizational and content-related orientation on a symbolic level and renamed itself the Faculty of Civil Engineering, Transportation Engineering and Architecture (FGPA) (Prebevšek, 2021). This further emphasised its interdisciplinary orientation.

In addition to civil engineering, which remained the central pillar of the faculty, over the years the faculty introduced new study programmes that reflected changes in industry and the labour market. In 1993, the programmes of Economic Engineering (in partnership with EPF UM, FERI UM and FS UM) and Transportation Engineering (Prebevšek, 2021) were introduced, enabling the integration of technical and economic knowledge and a comprehensive approach to infrastructure and transport. In 2007, the Architecture study programme was introduced, an important step towards interdisciplinary integration with civil engineering and urban planning. In the same year, the faculty switched to the Bologna education system, which enabled greater comparability of study programmes at the international level and increased student mobility. The renewed programmes included more practical work, project work and modern approaches to teaching, which contributed to greater connectedness with industry and strengthened the employability of graduates. Numerous new courses address digitalisation, sustainable development and the use of modern technologies in construction, transportation engineering and architecture.

In terms of the development of postgraduate study programmes, it should be noted that a doctoral study programme in civil engineering was introduced as early as 1982, and today the faculty offers master's and doctoral study programmes in all its core

areas. The third-cycle study programme in Civil Engineering focuses on the development of advanced research methods and technologies that contribute to innovation in the construction industry. The third-cycle study programme in Transportation Engineering focuses on the development of advanced mobility systems, sustainable transport and transport safety. One of the more important new additions is the third-cycle study programme in Economic Engineering, which is implemented in collaboration with FS UM and EPF UM. This is the first and only truly interdisciplinary study programme in the field of Economic Engineering in Slovenia. It comprehensively addresses the challenges at the intersection of technical and economic-business aspects. A third-cycle study programme in the field of architecture is currently in the process of accreditation.

The faculty began participating in the Erasmus programme in 1999 and joined the European network EUCEET (Prebevšek, 2021). It is also involved in several international projects, such as TRACE, GRETA, and FOOD4CE, which focus on sustainable development, digitalisation and innovation in construction. The faculty is known for its interdisciplinary approach, strong connections with the economy, and innovative teaching methods. In addition, it is one of the pioneers of tutoring in Slovenian higher education, having introduced a tutoring system in 2001, which has been upgraded over the years and includes both student and teacher tutors. Of particular importance is Platform 5.0, which represents a new concept of education in the fields of construction, architecture and transportation. This platform incorporates advanced technologies such as digital fabrication, robotics and 3D printing, and enables interdisciplinary collaboration between students and experts from various fields. FGPA UM is also one of the few faculties in Slovenia that actively develops the concept of sustainable construction and smart cities with an emphasis on digitalisation, green mobility and energy-efficient solutions.

3.5 Faculty of Chemistry and Chemical Engineering, University of Maribor (FKKT UM)

After the Technical College was incorporated into the University of Maribor, the first enrolment of students in the third year of the study programme in Chemical Technology took place in the same year (1975), marking the beginning of a four-year higher education programme (Glavič, 2024). After completing five semesters of study and a thesis, chemical technology engineers could continue their studies by enrolling in the third and fourth years. After completing their study obligations with

a thesis, they obtained a higher education degree with the title of Bachelor of Engineering in Chemical Technology (BSc. Eng. Chem. Tech.).

In the academic year 1980/81, the faculty's study programme was transformed into a two-year junior college programme and a four-year college programme, which had a common first year, then split and concluded with a diploma. The junior college programme, which initially covered mainly the field of chemical technology, gradually developed in the direction of chemical engineering. In the autumn of 1982, postgraduate studies in chemical technology also began, first at the master's level and later at the doctoral level (Trauner, 1994).

FKKT UM became an independent faculty in the academic year 1994/95, when the former Faculty of Technology was divided into four faculties. This was followed by a period of accelerated development in the fields of education, expertise and science. In 1996, the two-year junior college programme was abolished and the professional higher education study programme in Chemical Technology was introduced. In 2001, a new field of study, Biochemical Engineering, was introduced into the university study programme in Chemical Technology.

In 2009, the study programmes were reformed within the framework of the Bologna Process with a 3 + 2 structure. In the first cycle, the professional higher education study programme in Chemical Technology was retained, while the four-year university study programme in Chemical Technology was transformed into the first-cycle university study programme in Chemical Technology and the second-cycle study programme in Chemical Engineering with the fields of study Chemical Engineering and Biochemical Engineering. Two new study programmes were also introduced, namely the first-cycle university study programme and the second-cycle study programme in Chemistry. The postgraduate study programme for the education of Doctors of Science became the third-cycle study programme in Chemistry and Chemical Engineering. In 2019, the study programmes were renamed: the first-cycle university study programme in Chemical Technology and the second-cycle study programme in Chemical Engineering are now called Chemical Engineering, while the third-cycle study programme in Chemistry and Chemical Engineering was renamed Chemistry and Chemical Engineering (Prebevšek, 2021).

As part of the Recovery and Resilience Plan (RRP) project, the faculty is renewing its study programmes for the digital and green transition, introducing a virtual laboratory and preparing to issue micro-credentials for lifelong learning (Glavič, 2024). Due to the anticipated increase in the needs of the local pharmaceutical industry, in 2023 the faculty began preparations for the introduction of new study programmes in Advanced Biopharmaceutical Engineering in the 1st and 2nd cycles of study. To bridge the transition period until the first master's degrees of the new study programmes are awarded, a new field of study, Biopharmaceutical Engineering, will be introduced in the academic year 2025/26 in the second-cycle study programme in Chemical Engineering.

Today, the faculty provides a credit system of study and international student exchange. Within the framework of programmes such as Erasmus, CEEPUS and others, students can complete part of their study obligations abroad and thus gain valuable experience at renowned universities. Similarly, an increasing number of foreign students are completing part of their study obligations at FKKT UM (Prebevšek, 2021). Chemical engineering programmes are listed in the European Engineering Education Database (EEED) of the European Engineering Federation (EE), which enables graduates to obtain the EUR ING certificate.

The faculty currently educates approximately 100 graduates per year (60 in the 1st cycle and 40 in the 2nd cycle), who are directly employable in a wide range of Slovenian industries.

3.6 Faculty of Agriculture and Life Sciences, University of Maribor (FKBV UM)

Due to Slovenian policy requirements for the standardisation of study programmes offered at multiple educational institutions simultaneously, after 1980, the programmes at the Junior College of Agronomy of the University of Maribor were harmonised with those at the Faculty of Biotechnology of the University of Ljubljana. Since 1985, the school has been educating students in three fields of study, namely animal husbandry, plant production (arable farming and pomology and viticulture) and agricultural engineering. These study programmes already took into account the specific needs of the private agricultural sector to a large extent. The development of agriculture in the 1970s and 1980s increasingly focused on family farms. As a result, basic, development-oriented, and professional subjects were further strengthened during this period, and the duration of study was extended

from four to five semesters. In order to compensate for the lack of its own estate and to provide students with practical training, the school introduced the so-called master farm project in the academic year 1989/90, which the faculty continues to successfully develop and upgrade today (Ferčal & Kramberger, 2015).

In 1992, the Junior College of Agronomy was transformed into the College of Agriculture with a higher education study programme in Agronomy (specialisation: pomology and viticulture, duration: four years), and in the following years, it also developed higher education programmes for other specialisations. In 1994, it began enrolling students in the higher education programme in Agronomy (two courses: pomology and viticulture, and arable farming and horticulture) and the junior college programme in Agriculture (three courses: agronomy, animal husbandry and agricultural engineering). In the same year, the school leased the Pohorski dvor estate from the State Agricultural Land Fund, comprising 48 hectares of arable land, 60 hectares of orchards, 21 hectares of vineyards, 12 hectares of meadows and pastures, 8 hectares of botanical gardens and 245 hectares of forest (Nemec & Turk, 2005).

At the end of 1995, the College was transformed into the Faculty of Agriculture. The faculty enrolled its first university students in the academic year 1996/97, and until 2010, it educated students in a four-year university programme, three three-year higher education programmes, two two-year master's programmes, a four-year doctoral programme and a four-year single-cycle doctoral programme (Nemec & Turk, 2005).

Bologna three-year first-cycle study programmes have been implemented since the academic year 2006/07, namely (Ferčal & Kramberger, 2015): first-cycle university study programme in Agriculture (since 2014/15 Agriculture and Environment) and first-cycle professional higher education study programmes in Agronomy – Ornamental Plants, Vegetables and Field Crops; Biosystems Engineering; Organic Farming; Viticulture, Oenology and Pomology; Animal Husbandry and Management in Agri-Food and Rural Development (since 2019/20 Agricultural Economics and Rural Development).

Two-year Bologna second-cycle study programmes began in the academic year 2007/08, namely Agriculture, Agricultural Economics and Food Safety in the Food Chain (since 2008/09) (Nemec, 2010). In the same year, two third-cycle study programmes were also launched, initially as three-year programmes and, from the

academic year 2021/22, as four-year programmes, namely Agriculture and Agricultural Economics.

The launch of the Bologna study programmes coincided with two important milestones in the development of the faculty. Since its establishment in 1960, the school or faculty had been operating in Maribor, but in 2008 it moved to the renovated premises of Hompoš Castle in Hoče and was renamed the Faculty of Agriculture and Life Sciences (Nemec & Turk, 2005). All study programmes were internally evaluated in 2021, and their content is regularly updated.

The faculty is a member of the Food Quality and Health (FQH) association and the Danube Soya Association. It has concluded 72 inter-institutional agreements for student exchanges and 45 agreements for teaching staff mobility in Erasmus+ partner countries. In addition, it also cooperates with Erasmus+ partner countries, with which it has concluded 10 inter-institutional agreements covering both student exchanges and teaching staff mobility. The faculty is also active in the CEEPUS programme, participating in four different networks (Ferčal & Kramberger, 2015). In recent years, mobility in various fields has experienced fluctuations, but after a decline in 2020/21 due to the coronavirus pandemic, it is once again growing significantly in all areas, including student participation in summer schools, which reached record mobility in 2023/24 with 32 incoming and 9 outgoing participants.

3.7 Faculty of Logistics, University of Maribor (FL UM)

The Faculty of Logistics is the only specialised academic institution in the field of logistics and supply chains in Slovenia and this part of Europe. The faculty is one of the younger members of the university, the establishment of which began in 2002 with the signing of a letter of intent between the University of Maribor, the Municipality of Celje and the Municipality of Krško, that committed to providing the financial, infrastructural, personnel and status-organizational conditions for the establishment and operation of the faculty. In 2003, the first study programmes began to be prepared, namely first-cycle professional higher education and university study programmes, second-cycle study programmes and third-cycle study programmes, and the faculty was formally established the following year. Logistics studies began at the Celje and Krško locations in 2005 and were modernised a year later with the introduction of blended learning (Blend FL) in the online classroom and with video conference lectures. In 2007, the faculty awarded its first diplomas

to second-cycle students (Logistics Systems study programme) and began offering a third-cycle study programme in Logistics Systems (Univerza v Mariboru, Fakulteta za logistiko, n. d.).

In order to increase its international recognition, in 2008 the faculty obtained international accreditation from the European Council for Business Education (ECBE), committing itself to the continuous improvement and modernisation of teaching and research work at the faculty, followed by re-accreditations (which have been ongoing throughout the faculty's history). In 2009, the first first-cycle graduates received their diplomas and the faculty obtained the American ACBSP accreditation. This accreditation means that the study programmes are now recognised in the USA, Canada and Mexico; the faculty has also continued its successful re-accreditation throughout its years of operation (Univerza v Mariboru, Fakulteta za logistiko, n.d.).

In 2013, the faculty accredited the first joint second-cycle study programme in Logistics Systems in Economics, which it implemented together with the Faculty of Economics of the University of Novi Sad (Serbia). In 2016, a Programme Council was established, comprising representatives of experts from various fields of logistics, which acts as an advisory body for the field of study and academic development (Univerza v Mariboru, Fakulteta za logistiko, n. d.).

FL UM has also obtained international accreditation from the ELA (European Logistics Association), a leader in the field of accreditation of acquired logistics competences. In addition, it holds the title of Sports-Friendly Faculty and is a member of the Eco-School programme.

A major advantage of studying at the faculty is its engineering focus on new technologies, process optimisation and management as well as working with cutting-edge technology, which is also made possible by more personalised study in higher years (students not only learn about, but also work with cutting-edge equipment in practice). All this also contributes to the exceptionally high employability of graduates.

The following study programmes are currently offered at FL UM:

- first-cycle professional higher education study programme in Economic and Technical Logistics;

- first-cycle university study programme in Logistics Systems;
- second-cycle study programme in Logistics Systems; and
- third-cycle study programme in Logistics Systems.

To date, FL UM has enrolled a total of 5,838 students who have attended Bologna study programmes since the very beginning. It has awarded 895 diplomas to graduates of the first-cycle professional higher education study programme in Economic and Technical Logistics, 622 diplomas to graduates of the first-cycle university study programme in Logistics Systems, 370 diplomas to graduates of the second-cycle study programme and 35 diplomas to doctors of science. A total of 1,922 graduates have completed their studies.

In recent years, the first-cycle university study programme and the second-cycle study programme have also been actively implemented in English, the quality of which is recognised by students from all over the world. A large number of candidates from abroad have also completed the third-cycle study programme. The faculty also justifies its successful internationalisation by offering part-time studies in English from the academic year 2022/23 onwards. In the academic year 2024/25, 41 foreign students are enrolled in the first-cycle university study programme and as many as 68 in the second-cycle study programme. Since the academic year 2012/13, the faculty has also been involved in the Erasmus+ mobility programme, which has recently been enhanced with exchanges within the CEEPUS framework. The faculty also boasts an extremely successful organization of summer schools and an international student symposium, which takes place in a different country each year in cooperation with partner institutions.

3.8 Faculty of Natural Sciences and Mathematics, University of Maribor (FNM UM)

Study programmes focusing on natural sciences and mathematics had already been developed within the Faculty of Education. Thus, in the academic year 1996/97, enrolment in university double-subject pedagogical study programmes in Biology and ..., Physics and ..., Chemistry and ..., Mathematics and ..., and Production-Technical Education and ... took place for the first time. In 1999, a double-subject pedagogical study programme in Computer Science and ... was added. The year before, single-subject pedagogical study programmes in Mathematics and Physics

were also launched, and in 2002, the faculty also offered students the first non-pedagogical study programme in Mathematics (Haramija, 2011).

In 2006, a reorganization led to the division of the Faculty of Education into the Faculty of Natural Sciences and Mathematics, the Faculty of Arts and the new Faculty of Education. FNM UM took over the study programmes of the former PEF UM in the field of natural sciences and mathematics, while at the same time gaining autonomy, which enabled it to introduce new modern study programmes and strengthen research activities in the fields of biology, mathematics, physics and technology. The new Bologna study programmes began to be implemented in 2006. Due to the ever-increasing demand for such personnel in the economy (banks, insurance companies, stock exchange houses, programming companies, etc.), non-pedagogical study programmes were created.

University double-subject first-cycle study programmes Educational Biology, Educational Physics, Educational Chemistry, Educational Mathematics, Educational Computing and Educational Technology were first offered in the academic year 2008/09, but were gradually phased out due to strategic decisions and the transition to a single-cycle master's degree programme. The first step towards discontinuation was taken in the academic year 2016/17, when the enrolment in the first years of these study programmes was stopped. Students who were already enrolled have the opportunity to complete their studies in these study programmes by 2026, when they will be permanently discontinued. The first single-subject non-pedagogical first-cycle university study programme to be launched was Physics, which the faculty first offered in the academic year 2007/08. A year later, it was joined by the single-subject non-pedagogical first-cycle study programmes in Mathematics and Ecology with Nature Conservation, and another year later by the single-subject non-pedagogical first-cycle study programme in Biology. The faculty has updated and modernised these study programmes several times in line with the needs of the economy, and they remain part of the faculty's educational offering today (Vaupotič, 2011).

In 2016/17, a single-cycle master's degree programme in Subject Teaching was introduced. This programme includes six fields: Educational Biology, Educational Physics, Educational Chemistry, Educational Mathematics, Educational Computing and Educational Technology. The purpose of this study programme was to replace the discontinued double-subject study programmes and offer a more comprehensive and integrated education for future teachers (Zmazek, 2021).

Before the Bologna reform, the faculty offered the following master's degree programmes, which enabled students to obtain a master's degree in specific fields: biology, mathematics, mathematics – education, and physics – education. The faculty offered two postgraduate study programmes for specialisation in physics – education and environmental education. Two doctoral study programmes were also available to students: Biology and Mathematics.

After the Bologna reform, the faculty offered the following non-pedagogical second-cycle study programmes: Biology and Ecology with Nature Conservation, Physics and Mathematics. These study programmes are a natural continuation of the first-cycle study programmes of the same name. In addition to these, students can also choose between two single-subject second-cycle pedagogical study programmes: Educational Mathematics and Educational Technology. The first is particularly important, as it enables graduates to teach at grammar schools. The second-cycle pedagogical study programme in Educational Technology is particularly important for the training of technical teachers in schools. Among the third-cycle study programmes, the study programmes in Ecological Sciences, Physics and Mathematics were launched in 2009. These programmes were initially implemented as three-year programmes, but in 2018 they joined the doctoral school of the University of Maribor and now last four years (Zmazek, 2021).

Internationalisation is an important part of the faculty's strategy. It participates in Erasmus+ programmes, and some of its third-cycle study programmes are conducted in English, which attracts foreign students and increases the faculty's visibility in the international space.

3.9 Faculty of Organizational Sciences, University of Maribor (FOV UM)

The first undergraduate students enrolled at the College of Organizational Sciences in 1975. Two years later, the first students enrolled in the master's degree programme in Integral Quality and Reliability Management. In 1984, the school had its first doctoral student in the field of human resources education. In the 1980s, the school offered junior college and college study programmes in the field of labour organization and organizational informatics at the undergraduate level, as well as specialist, master's and doctoral study programmes at the postgraduate level. In 1989, the college was transformed into the Faculty of Organizational Sciences (Podlogar & Zupan, 2009).

In the academic year 1996/97, junior college study programmes were abolished and replaced by university and professional higher education study programmes in the field of labour organization and organizational informatics. The faculty began preparing Bologna study programmes in 2004 and implemented them two years later, when the first generation of Bologna students enrolled. In 2009, the second-cycle study programmes obtained ECBE international accreditation (Podlogar & Zupan, 2009).

Other major milestones in education over the past two decades include:

- the first generation of students enrolled in the second-cycle study programme in Management in Health and Social Care, which is run by FOV UM in collaboration with the Faculty of Health Sciences of the University of Maribor (FZV UM) (2010);
- the renovation of first- and second-cycle study programmes (2011 and 2017);
- the introduction of e-learning (2011);
- the renovation of doctoral studies (2015);
- the renovation of second-cycle study programmes (2016);
- enrolment of the first generation of students in the first-cycle professional higher education study programme in Sports Management (2017);
- accreditation of the first-cycle professional higher education study programme in Crisis Management (2018) and enrolment of the first students (2019/20);
- ECBE re-accreditation of second-cycle study programmes (2020);
- pilot implementation of shorter training courses for obtaining micro-credentials as part of the RRP Bionika pilot project.

Today, FOV UM offers first-cycle university study programmes in Organization and Management of Human Resources and Education Systems, Business Systems Engineering, and Organization and Management of Information Systems, as well as first-cycle professional higher education study programmes in Organization and Management of Human Resources and Education Systems, Business Systems Engineering and Organization and Management of Information Systems, and the newest study programmes in Sports Management and Crisis Management.

At the postgraduate level, the faculty offers second-cycle study programmes in Organization and Management of Human Resources and Education Systems, Business Systems Engineering and Organization and Management of Information Systems. Together with FZV UM, it also offers a second-cycle study programme in

Management in Health and Social Care. Third-cycle study programmes include Organization and Management of Human Resources and Education Systems, Organization and Management of Business and Work Systems and Organization and Management of Information Systems.

A special feature of studying at FOV UM is the way in which the teaching process is carried out. It is carried out in blocks, which means that students can regularly complete their study obligations and that an extraordinary exam date is also available to them after each completed lecture and exercise. This is a feature that has been present at the faculty throughout its existence and is very well received by students and the wider community. The faculty has a Career Centre, which supports students from enrolment to graduation with a variety of activities (case study competitions, round tables, workshops, participation in conferences, professional excursions, etc.), which significantly complements regular teaching activities and enables students to upgrade the skills and competences they need in the working environment. Students are also regularly involved in various student projects, demonstrations and tutoring, which the faculty began in 2008. International activities are also extensive, ranging from student and staff mobility to the organization of a traditional summer school.

3.10 Faculty of Mechanical Engineering, University of Maribor (FS UM)

The Department of Mechanical Engineering at the Technical College or Faculty of Technology (1985) offered study programmes in Textiles and Mechanical Engineering. In 1976, a postgraduate master's programme in textiles and a doctoral programme in mechanical engineering were launched. In 1993, an interdisciplinary university study programme in Industrial Engineering, specialising in Mechanical Engineering, was launched (in collaboration with EPF UM, FERI UM, and FGPA UM). After the establishment of FS UM (1995), it responded even more intensively to changes in industry, such as new technologies, materials, production processes and a growing spectrum of knowledge, for which engineering staff remain indispensable. Thus, in 1996, junior college studies were abolished and a three-year professional higher education study programme was introduced. In 1998, new fields of study were established in university study programmes: Environmental Engineering, Business Engineering, Engineering Design, Eco-Textile Engineering, Clothing Engineering and Engineering Management. In 2001, a credit system was introduced at the faculty, along with a new interdisciplinary field of study, Mechatronics, in the university study programme, and new fields of study,

Maintenance, Textile and Clothing Care and Clothing Construction and Modelling, in the professional higher education study programmes. In 2004, a new study programme in Toolmaking was added to the higher education study programme in Mechanical Engineering. In the same year, a modular approach to study was also introduced in the master's and doctoral study programmes in Mechanical Engineering, Textile Technology and Technical Environmental Protection (Prebevšek, 2021).

Between 2004 and 2009, FS UM redesigned its study programmes in line with the objectives of the Bologna reform. The Bologna study programmes were introduced gradually, first at the first cycle. Thus, in the academic year 2006/07, the first-cycle university study programme in Design and Textile Materials was launched. A year later, other first-cycle university study programmes joined it: Mechanical Engineering, the interdisciplinary study programme in Industrial Engineering and Mechatronics. In the academic year 2009/10, the first-cycle professional higher education study programmes in Mechanical Engineering and Textile Design Technology were introduced. In the same year, studies began in the second-cycle study programme in Design and Textile Materials and the third-cycle study programmes Mechanical Engineering and Technical Environmental Protection (Polajnar, 2025).

At the beginning of the next decade, additional study programmes and/or fields of study were developed at all three levels, some of which had already been redesigned by the end of the decade. An important milestone was the launch of the renewed doctoral study programme at the FS UM Doctoral School, which in the academic year 2019/20 replaced the previous third-cycle study programmes in Mechanical Engineering, Technical Environmental Protection and Design and Textile Materials. The range of doctoral studies was later supplemented with the accreditation of the third-cycle study programme in Industrial Engineering (Polajnar, 2025).

The Faculty of Engineering entered the academic year 2024/25 with the following study programmes:

- first-cycle university study programmes: Mechanical Engineering, Industrial Engineering, Mechatronics and Environmental Engineering;
- first-cycle professional higher education study programmes: Mechanical Engineering, Mechatronics and Textile Design Technologies;

- second-cycle study programmes: Mechanical Engineering, Industrial Engineering, Mechatronics, Environmental Engineering, Product Engineering Design and Design and Textile Materials;
- third-cycle study programmes: FS UM Doctoral School and Industrial Engineering.

The faculty is gradually changing the ratio between basic and professional knowledge, increasing the latter. In this sense, the faculty is continuously improving and renovating its study programmes, including the development of credit-rated extracurricular activities, free choice of courses and distance learning, as well as international cooperation. The first beginnings of the tutoring system date back to 1996, and in 1998, a project group called Quality Leap was appointed, within which tutoring was considered an important factor in the quality of the educational process.

In 65 years, 11,670 diplomas were awarded in the study programmes of FS UM and its predecessors: 6,212 in pre-Bologna university study programmes, 1,829 in pre-Bologna professional higher education study programmes, 1,148 in first-cycle university study programmes, 806 in first-cycle professional higher education study programmes, 92 in specialist study programmes, 862 in second-cycle study programmes, 418 in study programmes for obtaining a master's degree, and 303 in study programmes for obtaining a doctorate.

3.11 Faculty of Tourism, University of Maribor (FT UM)

The newest faculty of the University of Maribor is the Faculty of Tourism, based in Brežice, which was established in 2009 (Pavlakovič, 2017). The faculty received its first accreditation for the second-cycle study programme in Tourism in December 2011, followed by the accreditation for the first-cycle professional higher education study programme in Tourism and the first-cycle university study programme in Tourism in January 2012. The first students (89) enrolled in the first-cycle study programmes in the academic year 2012/13 (Pavlakovič, 2017), and soon after, the faculty also offered a second-cycle study programme (academic year 2014/15). From the outset, all study programmes were implemented as Bologna programmes, with an emphasis on interdisciplinary knowledge, field work, guest lectures by experts from the field, practical training and internationalisation.

The faculty made major changes to its study programmes in the academic year 2020/21. The aim was to keep pace with developments in tourism science, new trends and the needs of the economy. The new study programmes, with greater differentiation in content, have also been given new names: the first-cycle professional higher education study programme in Contemporary Tourism Practices, the first-cycle university study programme in Tourism: Cooperation and Development, and the second-cycle study programme in Tourist Destinations and Experiences.

The faculty completed the vertical structure of study programmes in the academic year 2022/23, when the first generation of doctoral students enrolled in the third-cycle study programme in Contemporary Tourism Studies. In the same year, the faculty also began implementing credit-rated extracurricular activities (KOOD), within which it currently offers three courses: Guest in Slovenian Society, Sustainable Mountaineering and Raising Awareness of Climate Change through Blogging on Platforms. In 2023, the faculty began planning and implementing shorter training courses for the award of micro-credentials, which it designs for students, the business community and the general public in the fields of green transition and digitalisation in tourism.

When teaching about tourism, it is particularly important to be aware that tourism is an activity created by people for people. The faculty therefore focuses on communication and relationships between providers and guests. This is why the faculty also offers extensive practical training. Students in the professional higher education study programme have 560 hours of practical training, while those in the university study programme have 400 hours. Both study programmes host many experts from the field who share their experiences with students. The first-cycle higher education study programme has many teaching staff who come from the business world and pass on their knowledge (based on real-life examples) to students. Since its establishment, the faculty has been working closely with the business world, public administration, civil society and the environment in general. In this regard, it has also established an advisory body – the FT UM Strategic Council.

Tourism is an international activity, which is why internationalisation is omnipresent at FT UM. In addition to offering programmes in English, Erasmus+, CEEPUS and other forms of mobility for students, teachers and researchers, the faculty is very

globally oriented. The study programmes require the learning of three foreign languages, and practical training and internships abroad are also available. Foreign students (most of whom are from the Western Balkans) study both in Slovenian and English study programmes at the Faculty of Tourism. An important milestone in this area was the establishment of part-time study in English at both the first- and second-cycles. The first students enrolled in the academic year 2018/19, and so far, students from India, Ukraine, Hong Kong, Bosnia and Herzegovina, Russia, Nigeria, Kazakhstan, Pakistan, Bangladesh and Slovenia have studied in the study programmes. For the purposes of part-time study in English, the faculty has organized a branch in Ljubljana. The first graduates of the English-language first-cycle professional higher education study programme defended their final theses in 2022, while the first graduates of the English-language master's programme received their diplomas in 2024.

In the academic year 2023/24, the first COIL (Collaborative Online International Learning) was also implemented as a form of mobility at home. Second-year students of the first-cycle professional higher education and university study programmes participated remotely with students from the Superior School of Technology and Management, the Polytechnic Institute of Beja, Portugal. In addition, the faculty also cooperates with many guest lecturers from other countries.

3.12 Faculty of Criminal Justice and Security, University of Maribor (FVV UM)

In 2003, the Faculty of Police and Security Studies from Ljubljana, which had previously been affiliated with the University of Ljubljana and was part of the Ministry of the Interior of the Republic of Slovenia, joined the University of Maribor. Its beginnings date back to 1973, when the Department of Internal Affairs was established at the Junior College of Administration in Ljubljana, within which studies in the field of internal affairs began to be carried out. In 1981, the Department was transformed into the Junior College of Internal Affairs within the framework of the Republican Secretariat for Internal Affairs, which was also a member of the University of Ljubljana. In 1995, it was transformed into the College of Internal Affairs and renamed the College of Police and Security Studies the following year. In 2003, it was transformed into the Faculty of Police and Security Studies and became a member of the University of Maribor. In 2006, it was renamed the Faculty of Criminal Justice and Security (Sotlar et al., 2013).

The beginning of the study programmes of today's FVV UM dates back to 1973, when junior college education was established for the needs of the state in the field of internal affairs. For the first six years, only on-the-job study was organised, but in the academic year 1979/80, part-time education was also introduced, which enabled participants from other institutions (territorial defence, administrative bodies for internal affairs, judicial bodies, the Yugoslav People's Army, etc.) to study. In 1981, the Junior College of Internal Affairs was established. A certain renovation of the study programme was carried out in 1991, when Slovenia became democratic and independent. For the academic year 1993/94, the call for enrolment also allowed for the enrolment of a certain quota of students. After the adoption of the Higher Education Act in 1993, the process of transforming the junior college into a higher education institution began. A new three-year study programme for obtaining a professional higher education in Security and Internal Affairs was approved in 1995. In the academic year 1996/97, the college began offering a third year of higher education studies for graduates of higher education institutions (Sotlar et al., 2023).

After the school became a faculty in 2003, the four-year university study programme in Security Studies and postgraduate studies in the form of four specialist programmes were launched for the first time in the academic year 2004/05. The three-year professional higher education programme was also renewed. In 2006, a master's programme was launched, followed by a doctoral programme in 2007. When the first-cycle professional higher education study programme in Information Security was accredited in 2010, the range of key educational areas developed by FVV UM was completed. Bologna study programmes at all levels began to be implemented in the academic year 2007/08 (Modic, 2023).

In the academic year 2024/25, the faculty offered five study programmes, namely:

- first-cycle higher education study programme in Security and Police Work (full-time and part-time);
- first-cycle higher education study programme in Information Security (full-time and part-time);
- first-cycle university study programme in Criminal Justice and Security Studies (full-time);
- second-cycle study programme in Criminal Justice and Security Studies (full-time and part-time); and
- third-cycle study programme in Criminal Justice and Security Studies (part-time).

In the academic year 2024/25, 983 students were enrolled in study programmes.

Foreign students are also enrolled in FVV UM study programmes as full-time or part-time students. In the academic year 2024/25, 52 foreigners were enrolled in FVV UM study programmes.

International mobility of students and staff takes place mainly within the framework of the Erasmus+ programme and the Swiss Mobility agreement, but the faculty is also developing bilateral cooperation with other similar institutions around the world (e.g. USA, Russia, Japan). Between the academic years 2006/07 and 2023/24, 217 FVV UM students went on exchange abroad, while 289 students from abroad came to the faculty (Modic, 2023). Each year, foreign exchange students at FVV UM can choose from approximately 40 first- and second-cycle courses, which are taught in English specifically for them. When it comes to staff mobility, on average, approximately five professors per year visit foreign institutions, while approximately twice as many foreign professors visit the faculty. The pinnacle of this type of cooperation is represented by foreign professors who take on the role of co-mentors to doctoral candidates as part of their doctoral studies.

3.13 Faculty of Health Sciences, University of Maribor (FZV UM)

The family of members of the University of Maribor grew for the first time after its establishment in 1993, when the Junior College of Health Care in Maribor was established as a public higher education institution within the University of Maribor. In the academic year 1993/94, the first generation of health care students enrolled in a junior college study programme lasting five semesters. In addition to lectures, seminars and laboratory exercises, the programme also included clinical exercises in teaching bases and professional practical training. As early as 1995, the junior college was transformed into a College of Health Care, which enrolled the first generation of full-time students in the professional higher education programme in Nursing in the academic year 1996/97. In the academic year 1998/99, the school also launched part-time studies for the first time (Pajnkihar, 2018).

Due to the requirements of the European Union, where the nursing profession is a regulated profession, the school began an intensive restructuring of the professional higher education study programme in Nursing in 2002, when Slovenia joined the EU. The following year, the programme was approved as being in line with

European Community Directives (EU 77/452 and EU 77/453). In 2006, the college was transformed into the Faculty of Health Sciences, thus becoming the first faculty in Slovenia in the field of nursing and health sciences (Pajnikihar et al., 2013).

The educational activities of the faculty can be defined through three periods. In the first period, during the time of the junior college and college, the emphasis was on the development of undergraduate full-time and part-time nursing studies. At the same time, postgraduate specialist study programmes began to be developed in the fields of community, gerontological and perioperative nursing, clinical dietetics and health informatics. In the second period, the emphasis was on the development of the first-cycle study programme in Nursing, which the faculty first launched in the academic year 2009/10 and which, with interim updates, is still being implemented today. This period was also marked by the development of second-cycle study programmes. Thus, in the academic year 2007/08, the second-cycle study programme in Nursing was launched, followed a year later by the second-cycle study programme in Bioinformatics, in collaboration with FERI UM and FNM UM. In 2009/10, the faculty, together with FOV UM, began implementing the second-cycle study programme in Management in Health and Social Care. In the third period, the focus was on designing a third-cycle study programme in Nursing and developing various study courses in the field of advanced nursing within the second-cycle study programme in Nursing. In the academic year 2020/21, the faculty began implementing the first advanced nursing study programme in Slovenia, entitled Integrated Care for Chronic Patients. FZV UM was also the first in Slovenian higher education to implement a third-cycle study programme in Nursing (2016/17) (Lorber, 2024).

In recent years, the faculty has successfully established an active network of cooperation with renowned educational, scientific and research, and clinical institutions around the world. Collaboration with internationally recognised professors enables the incorporation of the latest best practices and knowledge into existing and new study programmes. In addition, the faculty offers students the valuable opportunity to complete clinical training in foreign healthcare institutions. It offers students a wide selection of mentors from international universities, which enhances the quality of their education. Although the faculty does not offer study programmes in foreign languages, a number of foreign students are enrolled in full-time and part-time study programmes.

The Erasmus+ programme emphasises the importance of personal and professional development through education, training and practical experience. The number of international mobility opportunities for students and staff within the Erasmus+ programme is increasing every year at the faculty, as is the number of bilateral agreements, research projects and visiting professors. Student experiences confirm that Erasmus+ mobility opportunities enable personal growth, strengthen self-confidence and independence, broaden horizons and provide valuable skills and international friendships. On the other hand, FZV UM has been offering exchange students one of the widest ranges of courses at the University of Maribor for many years. Students can choose between courses covering both theoretical knowledge and practical skills tailored to the contemporary challenges of nursing and patient care.

3.14 Faculty of Arts, University of Maribor (FF UM)

The study programmes developed within the Faculty of Arts of the University of Maribor since 2007 are a logical continuation of the study programmes that existed at the former Pedagogical Academy or Faculty of Education. The range of study programmes has grown and for a long time has been characterised not only by its pedagogical orientation, but also by the permanent links between study programmes, as was the case in the early 1980s (Slovenian and German/English/Russian/Serbo-Croatian/Hungarian, English and German, history and geography, Slovenian/history/geography and social and moral education). Later, these combinations were offered to students in such a way that they could combine study programmes in accordance with their interests (Borstner, 2011).

In the academic year 2008/09, FF UM was the first in Slovenia to implement new Bologna study programmes in the fields of teacher education, humanities and social sciences (Jesenšek, 2011). It announced five single-subject and twelve double-subject first-cycle study programmes, while also continuing to implement all of the old four-year university programmes. The single-subject first-cycle study programme comprises 180 ECTS credits, while the double-subject programme comprises 90 ECTS credits and must be combined with another double-subject study programme. The single-subject study programmes were Slovenian Language and Literature, Sociology and Interdisciplinary Social Sciences, Psychology, German Studies, History, and the double-subject programmes were Slovenian Language and Literature, Philosophy, Geography, Hungarian Language and Literature, German

Language and Literature, English Language and Literature, Pedagogy, Sociology, History, Interlingual Studies – English, Interlingual Studies – German, Interlingual Studies – Hungarian. In the following years, two new double-subject study programmes were added to this selection: Pedagogy and Art History (2009/10).

The faculty maintained this selection in the following academic years, although the names of some study programmes, particularly in the field of translation studies, were changed (Jesenšek, 2011). With the academic year 2011/12, the faculty no longer offered pre-Bologna university study programmes, but announced its first second- and third-cycle study programmes. FF UM decided to offer 180 ECTS credits in the first cycle and 120 ECTS credits in the second cycle (3 + 2 model), as this allows for transparency in the development of competences. As professions in the field of education are regulated, the faculty only offers second-cycle study programmes in education. The new second-cycle study programmes were:

- single-subject non-pedagogical: Intercultural German Studies, Pedagogy, Translation and Interpreting, Psychology, Slovenian Language and Literature, Sociology, History;
- single-subject pedagogical: Slovenian Language and Literature;
- double-subject non-pedagogical: English Studies, Intercultural German Studies, Philosophy, Slovenian Language and Literature, History;
- double-subject pedagogical: Philosophy, Geography, Hungarian Language and Literature, German as a Foreign Language.

In the academic year 2011/12, the faculty also offered third-cycle study programmes (Jesenšek, 2011): Philosophy, Geography, German Studies, Hungarian Studies, Pedagogy, Slovenian Studies, Sociology, Behavioural and Cognitive Science, History. In the following years, some changes also occurred here, such as a change in the focus of the third-cycle study programme in Behavioural and Cognitive Neuroscience and a consequent change of name (today the programme is called Psychology), the discontinuation of the third-cycle study programme in Hungarian Studies and the introduction of a new third-cycle study programme in English Studies in the academic year 2023/24.

The relatively large number of study programmes led to their merging – the merged programmes began to be implemented in the academic year 2024/25. This did not compromise the development of competences and professional profiles, as the

(combined) study programmes introduced fields of study that essentially represent the former study programmes. At the beginning, the faculty also offered part-time studies in the first cycle (except for one programme) and the second cycle (only one programme), but due to insufficient interest among candidates, it gradually abandoned part-time studies.

The internationalisation of educational activities has been reflected in several ways throughout the faculty's development. Programmes in the field of linguistics and translation and/or interpreting have been predominantly conducted in a foreign language since the beginning, with the cooperation of teaching staff from foreign universities. The faculty has also participated in joint study programmes with foreign faculties. Foreign students are enrolled in FF UM programmes or participate in the faculty through mobility programmes (Erasmus+/CEEPUS), as the faculty has concluded more than 250 agreements with foreign higher education institutions. In the academic year 2023/24, 159 foreign students were on exchange at the faculty. The CEEPUS networks, currently nine in total, are also important. They collaborate with 16 countries in Central and Southeastern Europe to organize summer schools (e.g. in the fields of geography, translation studies, Slovenian studies and English studies).

3.15 Faculty of Medicine, University of Maribor (MF UM)

In 2003, the Faculty of Medicine was established as part of the University of Maribor (Krajnc, 2003). The first generation of students enrolled in the university study programme in General Medicine in the academic year 2004/05 (Hojs, 2004). The establishment of the faculty required prior clinical work, research, and teaching by numerous doctors at the Maribor General Hospital, later the Teaching Hospital. The programme was modelled on European medical faculties, lasted six years, was worth 360 ECTS credits and was only offered as a full-time programme (Hojs, 2004). A characteristic feature of the study programme is the intertwining of subjects within individual years (horizontally) and between years (vertically). The role of the connector is primarily played by problem-based learning modules. Based on problems in the form of a spiral, these cover all areas of medicine, from knowledge of the fundamentals of theory and practice, training in a clinical environment and the gradual achievement of independence, which leads students to an independent career as a doctor (Genzel-Boroviczeny et al., 2005). In the academic year 2004/05,

89 students were enrolled in the first year, and in recent years, enrolment has increased in line with the demand for doctors.

MF UM had its first graduates in the academic year 2009/10, and in the same year, an integrated second-cycle master's degree programme in General Medicine was established on the basis of a revised university study programme (Pečovnik-Balon et al., 2014). The objectives of the programme remained the same, but the renovation provided an opportunity for some content changes based on experience gained in implementing the university programme. The programme lasts six years, with practical work included in the sixth year. In 2014, an external evaluation of the study programme was also carried out by the Slovenian National Agency for Quality in Higher Education, and the study programme is also subject to self-evaluation every year. The faculty has also established a Centre for Medical Education with the aim of improving the quality of education for future doctors.

Based on the findings of the ongoing evaluation, the integrated master's degree programme in General Medicine was renewed in 2017. Some new courses were introduced (Early Establishment of a Relationship with the Patient, Fundamentals of Medical Technology, Evidence-Based Medicine, Clinical Nutrition, etc.), while the content of courses that were discontinued (Medicine in Emergency Situations, Maxillofacial Surgery, etc.) was incorporated to a greater or lesser extent into other courses. In the sixth year, a new practical course, Gynaecology and Obstetrics – Working with Patients, was introduced, as well as a new elective course in which students choose to work under supervision at a medical institution/department of their choice, thereby gaining a better understanding of the field of medicine that interests them in terms of their future professional career.

Due to the perceived need for dental medicine doctors, the huge number of applications to study dental medicine at the Faculty of Medicine of the University of Ljubljana, and the experience of the former Junior College of Dentistry in Maribor, which operated until 1970, MF UM began preparing an integrated second-cycle master's degree programme in dental medicine (Krajnc & Pivec, 2022). This programme also lasts six years or 12 semesters and is worth 360 ECTS credits. Preclinical and medical courses are taught by MF UM university teachers, while for the teaching of professional clinical subjects, the faculty relies on university teachers from the Faculty of Medicine at the University of Rijeka (Croatia). The programme began in the academic year 2021/22 with 20 students, and a year later, 30 students

were already enrolled in the programme. In the academic year 2025/26, another integrated second-cycle master's study programme will be launched for the first time – Pharmacy (Krajnc & Pivec, 2022). This is an interdisciplinary study programme that will be implemented by MF UM and FKKT UM. MF UM also implements a third-cycle study programme in Biomedical Technology.

When it was established, MF UM did not have its own building, so the teaching process took place at several locations. In the academic year 2013/14, MF UM began operating in a new building, which enabled the introduction of numerous innovations, primarily technical ones, into the study process. At that time, simulator-based learning was also introduced in many areas in the new simulation centre.

Just a few years after the faculty was established, students were already completing part of their regular study obligations abroad at partner faculties/universities. This most often took place within the framework of the Erasmus+ programme. Very often, they also complete practical training abroad.

3.16 Faculty of Education, University of Maribor (PEF UM)

The Pedagogical Academy, and since 1986 the Faculty of Education, is the cradle of educational, humanistic, social science and natural science study programmes, as three faculties have emerged from it. The following section presents the development of its study programmes in the fields of fine arts, music, sports training, primary school teaching, preschool education and basic pedagogical subjects, for which appropriate departments have also been established.

The junior college education programme in Art Teaching and Art Education existed until the academic year 1986/87. The following year, the programme in Art Pedagogy was launched, which was implemented until the academic year 1995/96. It was transformed into the university study programme in Art Pedagogy, which was implemented from 1996/97 to 2008/09, when it was transformed in accordance with the principles of the Bologna reform, but retained its name and duration (8 semesters). The first generation enrolled in the programme in the academic year 2009/10. Since the academic year 2013/14, a second-cycle study programme in Art Pedagogy has also been offered (Balažič, 2011).

Until the academic year 1986/87, two two-year junior college education programmes Music Teaching and Music Education were organized in the field of music pedagogy. From the academic year 1987/88 to the academic year 1995/96, a four-year higher education study programme in Music Pedagogy was in place. In the academic year 1996/97, it was replaced by the university study programme in Music Pedagogy. The latter was in place until the academic year 2009/10, when, following the Bologna reform, the first generation of students enrolled in the current single-subject study programme in Music Pedagogy (Weiss, 2011). From the academic year 2013/14 onwards, graduates have been able to enrol in the second-cycle study programme in Music Pedagogy.

The sports training programme has its roots in previous study programmes in the field of physical education from the 1960s, 1970s and 1980s, when it was also aligned with the programme of the College of Physical Culture in Ljubljana. Due to a severe shortage of appropriately trained coaches in northeastern Slovenia, a professional higher education study programme in Coaching of Selected Sports was established in the academic year 2005/06. Since 2009, a first-cycle professional higher education study programme in Sports Training has been operating in the form of part-time studies, bringing together many top coaches and top athletes (Puhaj, 2011). The faculty is also striving to launch a second-cycle study programme in Physical Education.

Primary School Teaching also has a long tradition. It began as a junior college education programme, and in the academic year 1987/88, a higher education programme in Primary School Teaching was launched (until 1995/96). It was later transformed into a four-year single-subject undergraduate study programme in Primary School Teaching with a one-year graduation period. It was offered in this form from 1996/97 to 2008/09. Following the Bologna reform, an internationally comparable first-cycle university study programme Primary School Teaching was developed, which has been implemented since the academic year 2009/10 (Črčinovič Rozman, 2011). Students can upgrade their competences in a one-year second-cycle study programme in Primary School Teaching, which was first offered in the academic year 2013/14. Both study programmes will be gradually replaced by a new integrated second-cycle master's programme in Primary School Teaching, which will be launched in the academic year 2025/26 (Univerza v Mariboru, Pedagoška fakulteta, 2022).

The junior college education study programme Preschool Teacher was first offered in the academic year 1984/85. In 1995/96, it continued as a three-year professional higher education programme in Preschool Education. In the academic year 2009/10, the first-cycle Bologna higher education study programme in Preschool Education began, which was upgraded in the academic year 2011/12 to the second-cycle study programme in Early Learning and Teaching (Lepičnik Vodopivec, 2011). In the academic year 2016/2017, the programme was redesigned and renamed the second-cycle study programme in Preschool Education.

The Department of Basic Pedagogical Subjects developed the second-cycle study programme in Inclusion in Education and the third-cycle study programme in Leadership in Education. While the former is implemented as a part-time study programme, the latter was discontinued in 2024. The faculty offers a third-cycle study programme in Educational Sciences, which has been implemented since 2009/10 and lasts three years.

PEF UM has concluded Erasmus+ agreements with around 100 foreign institutions for the mobility of students and staff. Incoming students can choose between 100 and 120 credits per year, and usually about half are implemented for them. Over the past 24 years, the faculty has carried out 274 outgoing student mobilities, 634 incoming student mobilities, 503 outgoing staff mobilities, and 243 incoming staff mobilities. In the last three years, the faculty has implemented COIL (Collaborative Online International Learning) programmes in cooperation with a Belgian partner institution, in which more than 150 students from both institutions participated, including more than 70 students from PEF UM. Students are also increasingly participating in combined intensive programmes that combine different forms of learning and cooperation with international partners (Univerza v Mariboru, Pedagoška fakulteta, 2022).

3.17 Faculty of Law, University of Maribor (PF UM)

In 1990, the former junior college became the College of Law. Studies within the four-year higher education programme began in the academic year 1991/92, and students of the higher education programme were able to complete their studies by 1996. The new study programme, which focused primarily on the study of commercial law, enabled law graduates to take the bar exam. In 1993, the College was transformed into the Faculty of Law. The study programme of the College of

Law did not change significantly, except that in the fourth year, students were given the opportunity to choose between civil, public, criminal, corporate and business law. Over the next decade, five master's degree programmes were established, namely in the fields of commercial law (1993/94), international law (1996/97), tax law (1997/98), labour law and social security law (2000/01) and EU economic law (2002/03) (Ivanjko et al., 2010). The first doctorate at PF UM was awarded in 1995.

With the introduction of Bologna study programmes, the study of law underwent a reform. In the academic year 2009/10, the following study programmes began to be implemented: the first-cycle university study programme in Law, the second-cycle study programme in Law and the third-cycle study programme in Law. For several years, the faculty also offered the second-cycle study programmes Business and Economic Law and Labour Law and Human Resources. In 2012, PF UM was the first in Slovenia to accredit two continuing education programmes: Specialisation in Tax Law and Specialisation in Corporate Law. In the same year, the faculty also accredited a second-cycle study programme in European Legal Studies. The programme, which was renewed in 2019, is the only one of its kind in Slovenia and is accredited for implementation in Slovenian and English. The renewed study programme is internationally comparable; it is a classic study programme in the field of EU law, covering both traditional content (European constitutional law, the internal market, judicial protection in the EU) and current topics (European energy law, judicial cooperation in the EU, digitalisation and cybercrime).

The current state of educational programmes at PF UM largely reflects the changes brought about by the Bologna reform (3 + 2 system). The following study programmes are currently offered at PF UM:

- first-cycle university study programme in Law;
- second-cycle study programme in Law (graduates of this programme can undertake the necessary practical training and then take the state bar exam if they have previously completed a first-cycle study programme in Law comprising 180 ECTS credits);
- second-cycle study programme in European Legal Studies;
- third-cycle study programme in Law (Univerza v Mariboru, Pravna fakulteta, 2021).

Several new study programmes have been developed in recent years. A new third-cycle study programme in European and Comparative Law has been accredited, which is being implemented in cooperation with the Faculty of Law of the University of Rijeka (Croatia). The faculty has also signed a double degree agreement with Wayne State University Law School in Detroit (USA), which is open to first-year students of the second-cycle study programme in Law. A five-year single-cycle master's study programme in Law is also in the process of preparation (for accreditation).

PF UM is also regularly active in the field of Erasmus+ student exchanges, hosting students from partner faculties in various countries every year and vice versa. To this end, it has concluded approximately 60 Erasmus+ agreements and offers visiting students (among other things) a wide range of courses on EU topics.² In addition, the faculty has agreements with law faculties in Russia, Uzbekistan, the USA and Armenia.

4 Instead of a Conclusion – Educational Activities of the University of Maribor in Figures

After presenting educational activities, with an emphasis on the development of study programmes in the period before the establishment and especially after the establishment of the University of Maribor, at the end of the chapter we provide some numerical data that complement and round off what has been said at both the member and university levels.

In January 2025, 178 study programmes were accredited at the University of Maribor (after the merger of the FNM UM and FF UM study programmes), specifically:

- 9 continuing education study programmes,
- 29 first-cycle professional higher education study programmes,
- 44 first-cycle university study programmes,
- 54 second-cycle study programmes,
- 5 single-cycle second-cycle master's study programmes,
- 37 third-cycle study programmes.

² For example *English Legal Terminology, Legal System and Institutions, Private International Law, Family and Succession Law, Public International Law, International Trade Law, Philosophy and Theory of Law, European Company Law – Freedom of Establishment, EU Constitutional and Administrative Law, European Judicial Protection, Legal Principles and Economic Policy of the EU Internal Market, Citizenship and Protection of Fundamental Rights in the EU, EU Foreign Policy, Arbitration Law and Alternative Dispute Resolution, European Labour Law, EU Competition Law, Cross-border Cooperation in Civil Matters.*

A list of study programmes by type and member institution is presented in Table 1.

Table 1: List of study programmes at the University of Maribor, January 2025

Type of study programme	UM member	Name of study programme
CONT.	FNM	Programme for teaching natural sciences in the 6th and 7th grades of elementary school
		Study programme for further training in the organization of information activities in education and training
	FZV	Nursing in psychiatry
	FF	Pedagogical and andragogical education
	PEF	Pedagogical and andragogical education
	PEF, FF	Study programme for continuing education in early learning of English or German
		Domestic science
	PF	Specialisation in tax law
Specialisation in corporate law		
HE	EPF	Business economics
	FERI	Electrical engineering
		Information and communication technologies
		Computing and information technologies
	FE	Energy
	FGPA	Transport engineering
		Civil engineering
	FKKT	Chemical technology
	FKBV	Animal husbandry
		Organic farming
		Agronomy – ornamental plants, vegetables and field crops
		Biosystems engineering
		Viticulture, oenology and pomology
	FL	Agricultural economics and rural development
	FOV	Economic and technical logistics
		Organization and management of information systems
		Business systems engineering
		Organization and management of human resources and education systems
		Sports management
	FS	Crisis management
Mechanical engineering		
FT	Textile design technologies	
FVV	Contemporary tourism practices	
	Security and police work	
FZV	Information security	
	Nursing	
Interdisciplinary (FERI and FS)	Mechatronics	
PEF	Pre-school education	
	Sports coaching	
UN	EPF	Economics and business sciences

Type of study programme	UM member	Name of study programme
	FERI	Media communications
		Electrical engineering
		Computing and information technologies
		Telecommunications
		Computer science and information technology
	FE	Energy
	FGPA	Transport engineering
		Civil engineering
		Architecture
	FKKT	Chemical engineering
		Chemistry
	FKBV	Agriculture and environment
	FL	Logistics systems
	FNM	Physics
		Biology
		Mathematics
		Ecology with nature conservation
	FOV	Organization and management of human resources and education systems
		Organization and management of information systems
		Business systems engineering
	FS	Design and textile materials
		Mechanical engineering
		Environmental engineering
	FT	Tourism: cooperation and development
	FVV	Security studies
	FF	English language and literature (double subject)
		Geography (double subject)
		Pedagogy (double subject)
		Psychology (single subject)
		Art history (double subject)
		Philosophy (double subject)
		Hungarian language and literature
		Sociology
		History
		Slovenian language and literature
		Translation studies
	German studies	
	Interd. (EPF, FGPA and FS)	Industrial engineering
	Interd. (FERI and FS)	Mechatronics
	PEF	Art pedagogy
		Music pedagogy
Primary school teaching		
PF	Law	
MAS	EPF	Economics and business sciences
	FERI	Computing and information technologies

Type of study programme	UM member	Name of study programme
		Media communications
		Electrical engineering
		Telecommunications
		Computer science and information technology
	FE	Energy
	FGPA	Civil engineering
		Transport engineering
		Architecture
	FKKT	Chemistry
		Chemical engineering
	FKBV	Agriculture
		Agricultural economics
		Food safety in the food chain
	FL	Logistics systems
	FNM	Physics
		Mathematics
		Biology and ecology with nature conservation
		Educational technology
	FOV	Educational mathematics
		Organization and management of information systems
	FS	Organization and management of human resources and education systems
		Business systems engineering
		Mechanical engineering
	FT	Product engineering design
		Design and textile materials
		Environmental engineering
		Tourist destinations and experiences
	FVV	Security studies
	FZV	Nursing
	FF	Psychology
		Translation and interpreting
		Art history (double subject)
		Slovenian language and literature
		English studies
		Geography
		Philosophy
		Hungarian language and literature
		Sociology
		History
	Intercultural German studies	
Pedagogy		
Interd. (EPF, FGPA and FS)	Industrial engineering	
Interd. (FERI and FS)	Mechatronics	
Interd. (FERI and FZV)	Bioinformatics	

Type of study programme	UM member	Name of study programme
	Interd. (FZV and FOV)	Management in health and social care
	PEF	Pre-school education
		Art pedagogy
		Inclusion in education
		Music pedagogy
	PF	Primary school teaching
		Law
SMAS	FNM	European legal studies
	Interd. (MF and FKKT)	Subject Teaching
	MF	Pharmacy
		General medicine
	PEF	Dental medicine
		Primary school teaching
	EPF	Economics and business sciences
	FERI	Electrical engineering
		Computer science and informatics
		Media communications
FE	Energy	
FGPA	Civil engineering	
	Transport engineering	
FKKT	Chemistry and chemical engineering	
FKBV	Agriculture	
	Agricultural economics	
FL	Logistics systems	
DOC	FNM	Mathematics
		Technology – education
		Ecological sciences
	FOV	Physics
		Organization and management of information systems
		Organization and management of human resources and education systems
	FS	Organization and management of business and work systems
		Doctoral School of the Faculty of Mechanical Engineering
		Contemporary tourism studies
	FT	Security studies
	FVV	Nursing
	FZV	Psychology
	FF	Slovenian studies
German studies		
History		
Sociology		
Philosophy		
Geography		
Pedagogy		
Art history		
English studies		

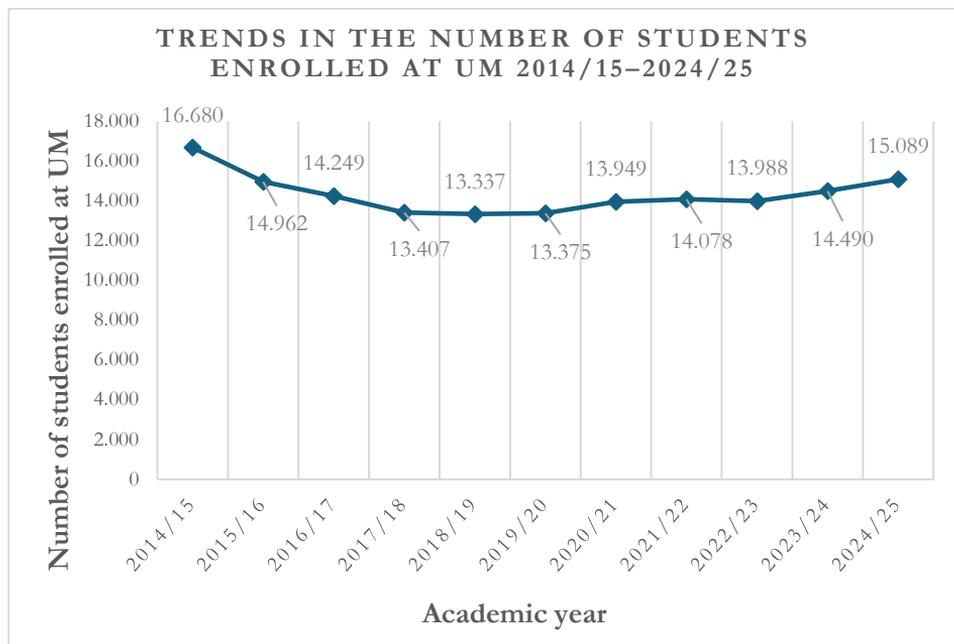
Type of study programme	UM member	Name of study programme
	Interd. (EPF, FGPA and FS)	Industrial engineering
	MF	Biomedical technology
	PEF	Educational sciences
	PF	Law
		European and comparative law

Legend: CONT. – continuing education programmes, HE – first-cycle professional higher education programmes, UN – first-cycle university programmes, MAS – second-cycle programmes (master's programmes), SMAS – single-cycle second-cycle master's study programmes, DOC – third cycle study programmes (doctoral study programmes); Interd. – interdisciplinary study programmes developed and implemented in cooperation between two or more members of the university.

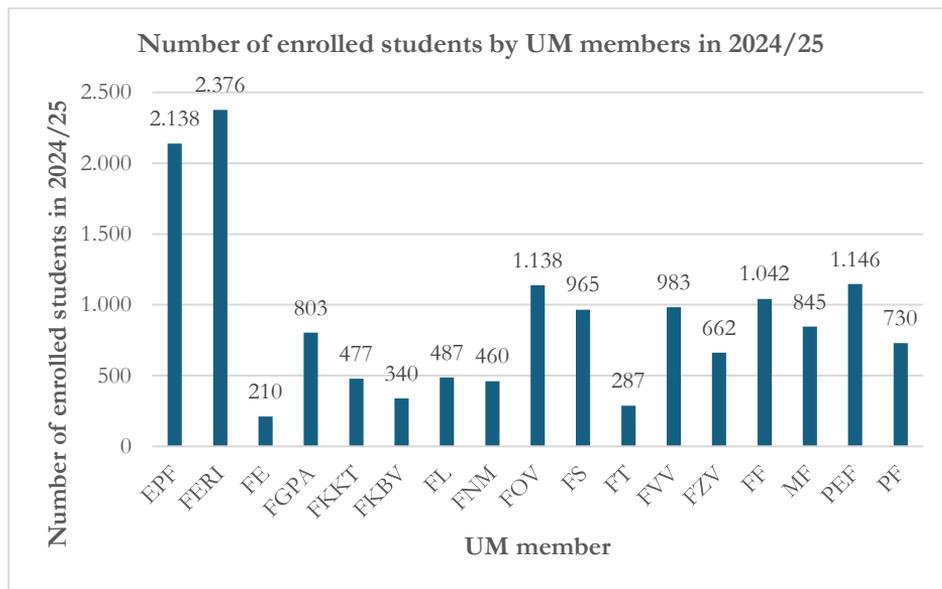
Over the last 11 years, there have been around 157,600 students enrolled in all years of study programmes at the University of Maribor, or an average of around 14,300 per year (Table 2, Graph 1). The observed period is characterised by the fact that all faculties, including the newest ones, enrolled students in at least all years of the first cycle of study. The faculties with the highest number of enrolled students in this period were FERI UM, EPF UM and FF UM.

Table 2: Number of enrolled students by member institutions of the University of Maribor for the period 2014/15–2024/25

Member institution/ Academic year	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	Total
EPF	2,183	1,891	1,826	1,644	1,637	1,623	1,676	1,724	1,736	1,858	2,138	19,936
FERI	2,136	1,998	1,884	1,903	1,957	2,140	2,137	2,252	2,245	2,300	2,376	23,328
FE	270	195	171	137	176	208	216	208	193	195	210	2,179
FGPA	873	699	641	569	545	581	661	646	685	755	803	7,458
FKKT	469	443	458	436	444	474	464	468	440	459	477	5,032
FKBV	630	543	480	416	389	366	363	351	312	335	340	4,525
FL	632	480	403	341	349	366	434	430	455	509	487	4,886
FNM	615	572	552	510	493	491	486	456	451	439	460	5,523
FOV	865	675	570	680	784	792	944	943	993	1,036	1,138	9,420
FS	1,174	1,118	1,064	1,077	1,075	971	1,068	1,049	961	985	965	11,507
FT	223	247	273	248	247	249	284	284	378	309	287	3,029
FVV	1,235	1,116	1,058	965	988	954	955	979	976	977	983	11,186
FZV	743	690	620	650	627	690	675	735	643	691	662	7,426
FF	1,787	1,495	1,355	1,211	1,135	1,062	1,058	1,042	980	1,010	1,042	13,174
MF	684	640	658	656	661	649	682	708	754	809	845	7,746
PEF	1,443	1,433	1,391	1,357	1,285	1,250	1,247	1,191	1,138	1,127	1,146	14,008
PF	719	728	845	607	546	510	599	613	648	696	730	7,241
Total	16,680	14,962	14,249	13,407	13,337	13,375	13,949	14,078	13,988	14,490	15,089	157,604



Graph 1: Trends in the number of students enrolled in UM 2014/15–2024/25

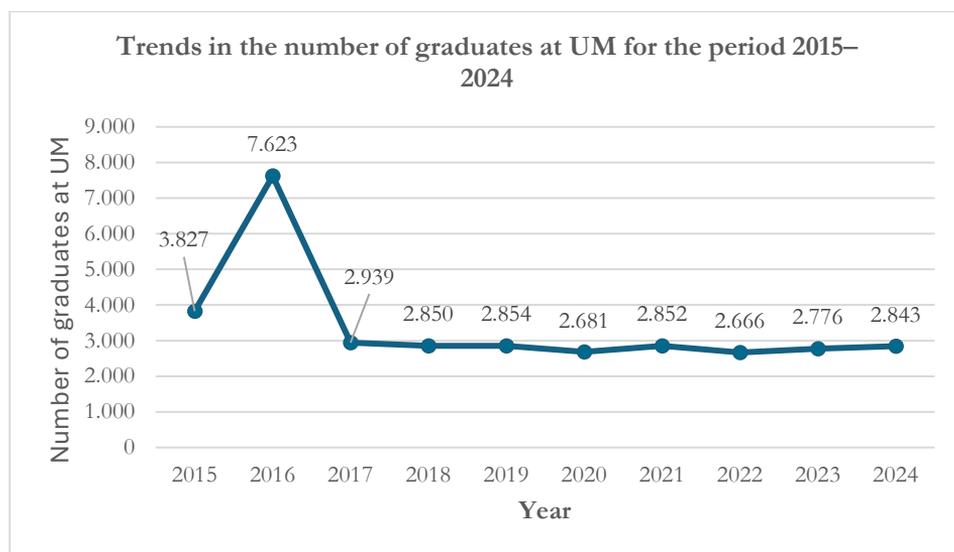


Graph 2: Number of enrolled students by members of the University of Maribor in the academic year 2024/25

In the last academic year (2024/25), FERI UM and EPF UM recorded the highest enrolment, with over 2,000 enrolled students, followed by PEF UM, FOV UM and FF UM with 1,000 enrolled students. There are considerable differences in the number of students among the members, with the largest faculty having approximately ten times more enrolled students than the smallest faculty (Graph 2).

Over the last ten years, i.e. from 2015, when the newest member also had its first graduates, to 2024, a good 39,000 graduates have completed their studies in all three cycles at the University of Maribor (Table 3).

In 2015, just over 3,800 graduates completed their studies at the University of Maribor. The number almost doubled in 2016 to over 7,600, which was influenced by the fact that this was the last year when it was still possible to complete the old pre-Bologna study programmes in accordance with the Higher Education Act. A large number of students who had temporarily interrupted their studies also decided to complete these programmes and then completed the remaining obligations and graduated. The following year (2017), the number fell to just over 2,900 graduates, and since then there have been no major deviations – the difference is 100–200 graduates per year (Graph 3).



Graph 3: Trends in the number of graduates at the University of Maribor for the period 2015–2024

Table 3: Number of graduates by member institutions of the University of Maribor for the period 2015–2024

UM member/Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total
EPPF	444	1,149	357	339	333	306	339	260	303	325	4,155
FERRI	451	798	359	327	397	356	381	398	418	451	4,336
FE	40	45	38	32	26	23	22	26	46	53	351
FGPA	209	424	138	146	123	110	115	117	124	100	1,606
FKKT	107	181	88	96	96	103	89	113	109	109	1,091
FKBV	88	160	82	95	100	74	67	92	54	45	857
FL	125	132	100	79	78	47	53	57	78	70	819
FNM	148	261	126	149	108	102	94	97	90	93	1,268
FOV	279	1,066	130	132	126	151	151	161	172	185	2,553
FS	234	493	227	214	258	246	233	233	249	213	2,600
FT	11	18	19	37	28	35	37	25	23	33	266
FVV	244	357	203	164	208	194	220	168	195	185	2,138
FZV	182	274	152	138	179	163	181	166	152	181	1,768
FF	520	907	308	298	253	220	260	252	207	255	3,480
MF	105	98	121	98	109	83	117	80	81	105	997
PEF	410	598	344	326	299	347	354	285	320	302	3,585
PF	230	662	147	180	133	121	139	137	155	138	2,042
Total	3,827	7,623	2,939	2,850	2,854	2,681	2,852	2,667	2,776	2,843	33,912

And finally, if we had to summarise the main characteristics of educational activities at the University of Maribor in a few sentences, we could say that they are represented by a comprehensive and diverse range of study programmes in the fields of technology, natural sciences, agriculture, medicine, social sciences and humanities, which are constantly being updated and adapted to the needs of society, interdisciplinarity, internationalisation, and a constant number of enrolled students and graduates. In its fifty years of existence, the University of Maribor has long outgrown the needs of the local and regional environment and has become an important Slovenian higher education institution that confidently operates in the global academic arena.

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SCIENCE AND ARTS AT THE UNIVERSITY OF MARIBOR

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Throughout its history, the University of Maribor has built a strong research and artistic tradition, combining the originality of scientific thought and creative expression with social responsibility. Despite comparatively limited financial resources, it demonstrates high scientific efficiency and competitive research quality, reflected in publications with high scientific impact. Scientific research activities are strategically implemented through three programme cores: Artificial Intelligence and Data Science in Biomedicine, Materials and Technologies as well as Heritage Science and Climate Change. Emphasis is placed on horizontal integration and the creation of interdisciplinary synergies. Development takes place in the fields of natural sciences and engineering, life sciences, social sciences and humanities, and artistic creation. A key role is played by state-of-the-art research infrastructure, in which the University continuously invests. The University of Maribor actively develops the principles of open science, strengthens international connectivity, respects ethics in research, and involves students in research work to address social challenges and support the economic progress of the region.

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University of Maribor Press

1 Introduction and General Overview

The University of Maribor is the second largest and second oldest Slovenian university, established in 1975. It comprises 17 faculties, a university library, and student dormitories. In the academic year 2024/25, it has more than 15,000 students and over 2,100 employees, including more than 1,300 researchers. Throughout its history, it has built a strong research and artistic tradition, combining the originality of scientific thought and creative expression with social responsibility.

An analysis of the trends in the number of employees and scientific publications at the University of Maribor between 2004 and 2023 (Tancer Verboten & Korošak, 2025) shows that the number of higher education teachers and researchers was strongly influenced by external circumstances, particularly the economic crisis and subsequent austerity measures, such as the Fiscal Balance Act (ZUJF) (2012), which caused a noticeable decline between 2009 and 2015, while the recovery period after 2015 enabled renewed growth (Figure 1). In contrast, the number of scientific publications recorded constant and significant growth throughout the entire period, regardless of fluctuations in staff numbers. This resilience and growth in scientific productivity can likely be attributed to a combination of increasing pressure to publish due to national and internal evaluation criteria (criteria of the Slovenian Research and Innovation Agency – ARIS, habilitation requirements) and the continuous availability of European research funding. This indicates the university's adaptability and strengthening of its research focus despite unstable staffing conditions.

This strengthening of the research focus and adaptation to international trends, reflected in the growth of publications, is also evident in the active role of the University of Maribor as a research institution involved in numerous important European networks and initiatives. These include, for example, ATHENA European University (n.d.), the European University Association (EUA) (n.d.), the European Open Science Cloud Association (EOSC) (n.d.), and the Coalition for Advancing Research Assessment (CoARA) (n.d.). Such membership and collaboration support the University of Maribor's commitment to international cooperation, interdisciplinarity, and academic freedom and autonomy, further fostering the development of its research environment and contributing to its visibility in the European area.

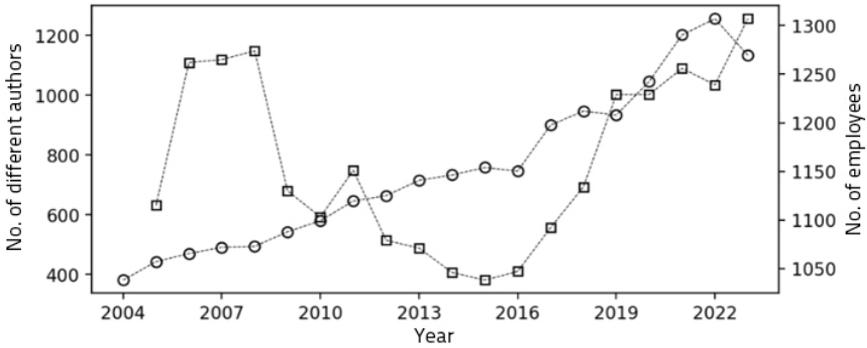


Figure 1: Trends in the number of higher education teachers and researchers at the University of Maribor (squares) and the number of published scientific articles (circles) where the first or lead author is affiliated with the University of Maribor in the years 2004–2023.

Source: (OpenAlex, University of Maribor HR database)

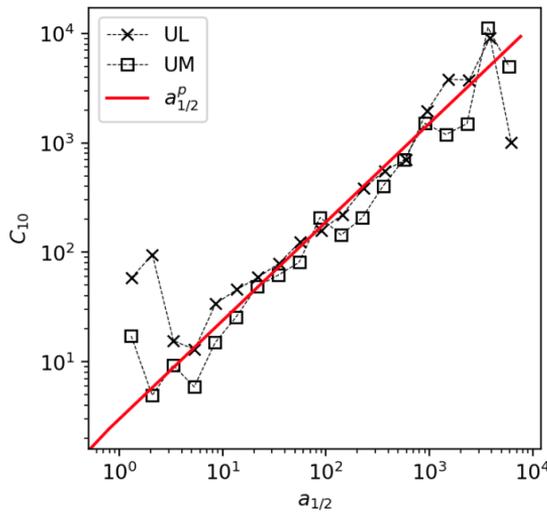


Figure 2: The ratio between SICRIS points A1/2 ($a_{1/2}$) and 10-year citations (C_{10}) for researchers at the University of Maribor (UM, \square) and the University of Ljubljana (UL, \times). Values of $a_{1/2}$ were grouped into 20 logarithmically evenly distributed bins. The plotted points represent the average C_{10} value within each bin, drawn against the geometric midpoint of the corresponding $a_{1/2}$ bin, on a log-log scale. The red line illustrates a power function of the form $C_{10} \propto (a_{1/2})^{0.9}$.

Source: (SICRIS database for the period 2018–2023)

Further insight into research performance is provided by Figure 2, which shows the relationship between SICRIS publication points ($a1/2$) and the number of pure citations in the last 10 years ($C10$) for researchers at the University of Maribor (squares) and the University of Ljubljana (crosses), with both axes on a logarithmic scale. The data, shown as the average $C10$ within logarithmically distributed bins of $a1/2$, indicate a strong positive correlation for both universities, following approximately a power law (red line, $C10 \approx (a1/2)^{0.9}$). This means that researchers with a higher number of publication points also have, on average, a higher number of citations. The data for the University of Maribor and the University of Ljubljana follow a very similar trend, suggesting comparable dynamics between publications and their impact at Slovenia's two largest universities.

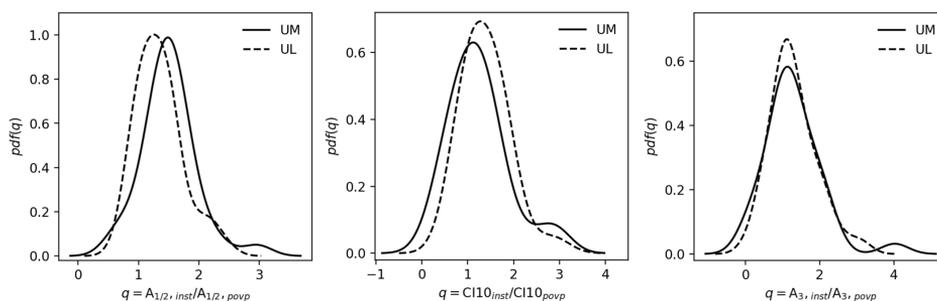


Figure 3: Distributions of ratios between SICRIS indicators ($A1/2$, $CI10$, $A3$) of scientific publications for the institution (UM, UL) and the national average for each research subfield according to the ARIS classification (1 represents the national average). Only fields with more than 20 researchers at the institution were considered; all indicators are expressed per number of researchers. Shown are kernel density estimation functions of the distribution histograms.

The analysis of the distributions of ratios between SICRIS indicators ($A1/2$, $CI10$, $A3$), presented in Figure 3, reveals similarities in scientific productivity among researchers at the University of Maribor and the University of Ljubljana relative to the national average horizontally across all fields. The distinct overlap of kernel density distributions for all three indicators indicates a comparable level of scientific excellence at both universities. This noticeable convergence in scientific productivity is not coincidental but is most likely the result of long-standing evaluation of research performance through publication metrics, which has gradually led to practically equalized research output per researcher. The results empirically support the thesis that systematic assessment of research work through bibliometric

indicators has created an environment in which research practices at both universities have been optimized to such an extent that today they produce remarkably similar results, consistently exceeding the national average.

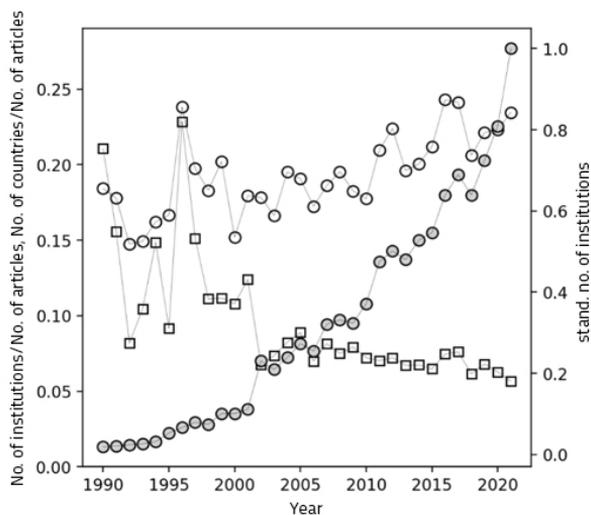


Figure 4: Dynamics of international collaboration of the University of Maribor in scientific production during the period 1990–2021. Shown are trends of the normalized number of unique co-author institutions (grey circles), the ratio between the number of unique institutions and the number of published articles (empty circles), and the ratio between the number of countries and the number of published articles (squares).

Source: (OpenAlex)

The analysis of the University of Maribor’s international engagement during the period 1990–2021 reveals a pronounced trend of strengthening connections with the global research area. As shown in Figure 4, the number of unique international institutions with which the University of Maribor collaborates in publishing scientific articles (represented by grey circles) has experienced dramatic growth. In the early 1990s, collaboration with international institutions was still in its initial phase, while after 2000 we observe accelerated growth.

The dynamics of the ratio between the number of unique institutions and the number of published articles (empty circles) indicates increasing efficiency of international collaboration. The University of Maribor is not only collaborating with an increasing number of institutions over the years but is also increasing the number of co-authored publications with existing partners. This transformation reflects the

University of Maribor's strategic orientation toward the internationalization of research work and demonstrates successful integration into the international scientific community, which is reflected in the growing production and quality of research work. The marked increase in international collaboration after 2010 also coincides with greater involvement in European research programmes and other forms of international networking.

1.1 Strategic Research Directions

Research activities at the University of Maribor are strategically implemented (Univerza v Mariboru, n.d.-c) through three programme cores: Artificial Intelligence and Data Science in Biomedicine (Life Sciences, ERC LS), Materials and Technologies (Physical Sciences and Engineering, ERC PE), and Heritage Science and Climate Change (Social Sciences and Humanities, ERC SH). These cores represent central points around which research activities from various fields are organized and interconnected. Special emphasis is placed on horizontal integration of these areas and the creation of interdisciplinary synergies, enabling more efficient utilization of research potential, easier acquisition of international projects, and achievement of breakthrough results.

A key role in achieving strategic research objectives is played by state-of-the-art research infrastructure (Univerza v Mariboru, n.d.-d). In recent years, the University of Maribor has made significant investments in upgrading and expanding research equipment, laboratories, and other facilities, which has substantially contributed to improving the quality and competitiveness of research work.

Modern research infrastructure, including advanced computing systems for processing large databases, specialized laboratories for material research, simulation systems, and advanced analytical instruments, forms the foundation for conducting advanced research within all three programme cores. Particularly important are the IT infrastructure supporting the development and implementation of AI methods and specialized equipment for materials and technologies, which enables the development of advanced materials and technological solutions. Recently, through projects such as HPC RIVR, RIUM, and others, the University of Maribor has significantly upgraded its research infrastructure and established an open-access policy, allowing research organizations and companies to access its facilities.

The University recognizes that continuous investment in research infrastructure is of strategic importance for the long-term development of scientific excellence. In the coming period, it plans further investments in upgrading research equipment and building new research facilities within the INNOVUM Platform, with a special focus on infrastructure supporting interdisciplinary research at the intersection of programme cores. These investments will include the establishment of an Advanced Computing and AI Centre, as part of which the University is already involved in the future AI Factory within the new supercomputing centre; upgrading laboratories for materials of the future, where the University, in partnership with Elettra Sincrotrone Trieste and Graz University of Technology, is developing a new HB SAXS synchrotron beamline; and creating modern research facilities for studying climate change and preserving cultural heritage.

The University of Maribor strives for optimal utilization of research infrastructure through mechanisms of capacity sharing, open access, and collaboration with industry. Special attention is given to establishing joint research platforms accessible to researchers from various disciplines and partners from industry and other research organizations, further strengthening the university's role as a regional hub of research excellence.

Despite comparatively limited financial resources, the University of Maribor demonstrates high scientific efficiency and competitive research quality, reflected in comparable results according to staff numbers and a high share of publications with significant scientific impact. The University of Maribor successfully manages human capital, collaboration networks, and selective publishing strategies, enabling competitiveness even under financial constraints.

The University of Maribor's vision for the period 2021–2030 includes sustainable development of scientific and artistic fields, implementation of open science principles (Univerza v Mariboru, n.d.-a, n.d.-b), strengthening international connectivity, upholding ethics and integrity in research, and actively involving students in research and development activities to address current societal challenges and support the region's economic progress.

1.2 Development by Scientific and Artistic Fields

1.2.1 Physical Sciences and Engineering

In the field of physical sciences and engineering, the development of research work followed the establishment of the first technical study programmes as early as the late 1950s. With the introduction of higher levels of study in the 1970s, research activity also strengthened, gradually gaining depth and international significance.

Engineering sciences became established through research in areas such as fluid technology, welding, mechatronics, advanced materials development, energy, power electronics, robotics, and artificial intelligence. These studies are directly linked to the programme core of materials and technologies, while research in artificial intelligence also contributes to the programme core of artificial intelligence in biomedicine. Significant achievements include the development of Slovenian nanosatellites, advanced systems for automation and robotization of production processes, and innovative solutions in sustainable construction and transport infrastructure, which also contribute to the programme core of heritage science and climate change.

These accomplishments are supported by state-of-the-art technical infrastructure, including specialized laboratories for mechatronics, robotics, and artificial intelligence, advanced measuring instruments for material testing, vacuum chambers and clean rooms for space technology development, and modern simulation systems for planning sustainable construction and energy solutions. Recent investments in upgrading laboratory equipment and establishing prototyping centres have significantly increased research capacities and enabled closer collaboration with industry in developing innovative technological solutions.

Chemical research has focused on new materials, process engineering, and analytical methods, which are successfully transferred into industrial practice. In the field of energy, researchers have developed important innovations to improve energy efficiency and the use of renewable energy sources.

Natural science research has contributed significant theoretical breakthroughs and applications. Mathematicians in Maribor are internationally recognized for achievements in functional analysis, algebra, and graph theory, and their work

provides the theoretical foundation for the development of artificial intelligence within the programme core of biomedicine. Physicists have developed strong research cores in biophysics, soft matter physics, and the physics of complex systems, which are connected to the programme core of materials and technologies. Biological research has enriched the understanding of ecosystems, biodiversity, and the adaptation of organisms to changing environments, which significantly contributes to the programme core of heritage science and climate change.

1.2.2 Life Sciences

The development of life sciences at the University of Maribor represents a story of rapid growth and specialization. Researchers in the field of biology are recognised for their achievements in microbiology, botany, zoology, plant and animal physiology, ecology, and the didactics of biology and chemistry. Among the research orientations, studies of biological invasions, morphometric and taxonomic analyses of mammals, vegetation ecology, and ethological research on insects stand out in particular. An important bridge towards interdisciplinarity is provided by achievements in landscape ecology, which are based on the use of the most advanced GIS tools. The researchers also focus on studying the impacts of climate change on various organisms and habitats, as well as on conservation biology, especially research on rare plant species and grassland ecosystems, which hold key conservation value in Slovenia.

Medical research ranges from molecular genetics and physiology to clinical sciences and public health, with a special emphasis on translational medicine, which enables the transfer of fundamental research into clinical practice. These studies are central to the programme core of artificial intelligence and data science in biomedicine, where medical knowledge intertwines with advanced computational approaches for disease diagnostics and treatment.

Research in agriculture and biosystems sciences focuses on developing sustainable food production, plant and animal protection, and processing high-quality agricultural products. With its emphasis on sustainable practices and adaptation to environmental changes, this research connects to the programme core of heritage science and climate change, while the development of new biotechnologies contributes to the programme core of materials and technologies.

Health sciences have developed research approaches that combine clinical practice, biotechnology, and information technologies. Research focuses on improving healthcare, developing new medical devices and procedures, and applying advanced technologies in medicine. These studies form a bridge between the programme cores of artificial intelligence in biomedicine and materials and technologies, as they combine the development of advanced materials for medical purposes with the use of artificial intelligence for clinical data analysis and decision support. A key element of this research is specialized medical infrastructure, which includes advanced imaging technologies, laboratory capacities for cellular and molecular research, and simulation environments for testing new therapeutic approaches.

An important characteristic of life sciences at the University of Maribor is their interdisciplinarity and integration with other scientific fields, from mechanical and electrical engineering to social sciences and humanities, enabling comprehensive approaches to solving complex challenges in health, nutrition, and the environment.

1.2.3 Social Sciences and Humanities

Social science and humanities research at the University of Maribor has a rich tradition dating back to the beginnings of higher education in Maribor. The first research groups in the field of social sciences emerged as early as the 1960s, focusing on economics, marketing, and organizational sciences. As the university developed, research expanded into education, linguistics, history, philosophy, and the arts.

Contemporary social science research addresses current societal challenges, from economic transformations and legal aspects of globalization to security issues, tourism, and organizational change. This research contributes to the programme core of heritage science and climate change through analyses of the social dimensions of responses to climate change and sustainable development. Humanities research enriches the understanding of cultural, linguistic, and identity-related issues, with a strong emphasis on regional and national characteristics within the European context, representing a key element of the heritage science programme core.

Researchers in social sciences and humanities at the University of Maribor increasingly incorporate digital approaches and big data analytics into their work, opening new perspectives on social phenomena and cultural processes. This digital

approach connects with the programme core of artificial intelligence in biomedicine through analyses of healthcare systems and ethical issues in medicine. Interdisciplinary collaboration with natural sciences, engineering, and life sciences enables a more comprehensive understanding of contemporary social challenges and fosters the development of innovative solutions that transcend the boundaries of individual programme cores, creating unique synergies across different fields.

1.2.4 Artistic Activity

The development of artistic activity at the University of Maribor is an essential complement to scientific work and contributes to the university's overall mission. Artistic creation has evolved in the fields of architecture, design, visual and musical arts, and literary production.

Modern infrastructure, including digital fabrication laboratories, enables innovative artistic expression at the intersection of technology and creativity. This approach connects with the programme core of materials and technologies through the development and testing of new materials and technological solutions. Artistic activity transcends the boundaries of individual disciplines and integrates with research work in interdisciplinary projects that combine art, science, and technology, thereby contributing to all three programme cores.

Architectural creation combines aesthetic, technical, and social aspects of spatial design, with a special emphasis on sustainable approaches and regional characteristics, linking it to the programme cores of heritage science and climate change as well as materials and technologies. Artistic work in the fields of music and visual arts enriches the cultural life of the university and the wider community and contributes to the development of artistic theory and practice, with digital technologies and artificial intelligence increasingly integrated into artistic processes, creating bridges to the programme core of artificial intelligence.

A key feature of artistic activity at the University of Maribor is its connection with education and research, enabling the transfer of artistic knowledge and experience into the teaching process and the development of new methodological approaches in art pedagogy.

Planned investments in research and artistic infrastructure will enable the establishment of specialized studios, workshops, and laboratories that combine traditional artistic techniques with modern technologies, supporting not only artistic creation but also interdisciplinary research projects that integrate artistic approaches with scientific methods to address complex social and technological challenges.

1.2.5 Development of Professional Support for Research Activities

The importance of professional support for research activities in the European research area began to grow over the past fifty years due to the expansion of research activities, the increasing number of research funding programmes, their complexity in applications, financial reporting, demonstrating impact, and the demanding nature of audits, as well as the size, interdisciplinarity, and international integration of consortium partnerships.

Efforts are underway in Europe to increase the visibility and recognition of the profession of Research Manager and Administrator (RMA) and to establish a unified qualification framework for training such personnel (EARMA, European Association of Research Managers and Administrators, n.d.). This is a demanding profession requiring complex knowledge, competences, and skills across various fields in constantly changing circumstances with numerous challenges.

The beginnings of professional support for research activities at the University of Maribor date back to 1971, when the Development Department was operating. In 1982, the Service for Education and Research Activities was founded, followed by the Service for Research Activities in 1986, when the term “research activities” first appeared independently in the name of an organizational unit.

In the following decades, various organizational units were established: in 1995, the Service for the Development of Education and Scientific Research; in 1996, the Department for the Development of Scientific Research Activities; in 1997, the Service for the Development of Education and Scientific Research; and in 2005, the Development Department, which included the Service for the Development of Scientific Research and Artistic Activities.

A significant milestone was reached in 2009 with the establishment of the Department for International, Research, and Student Affairs, which included the Service for the Development of Scientific Research and Artistic Activities and, for the first time, a Project Office. This marked the first formal creation of an office dedicated to providing professional support to researchers in applying for and implementing projects funded by various European and international sources, as well as the establishment of a project database for systematic monitoring of national and international projects.

The development of professional support for research, artistic, and project activities at the University of Maribor continued through several organizational changes in the following years. In 2010, within the Department for International, Research, and Student Affairs, the need was recognized for specialization and professionalization of project support for international projects (International Project Office) and for managing the growing number of projects co-financed by European Structural Funds under national cohesion policy (Service for Efficient Use of European Structural Funds).

In 2011, the Department for Research and Arts was established, including the Service for Support to Researchers and Projects of University of Maribor members and the University Project Office. In 2018, the Service for Career Development of Students and Project Support was founded, marking the formal beginning of the University of Maribor Career Centre, although some career orientation activities for students and graduates had already been carried out earlier. By 2022, the Department for Research and Arts included three centres with support services: the Centre for Development and Support of Scientific Research and Artistic Activities, the Centre for Project Support, and the Career Centre of the University of Maribor.

Another important milestone in organizing support for scientific research activities at the University of Maribor was the implementation of the Scientific Research and Innovation Activities Act (“Zakon o znanstvenoraziskovalni in inovacijski dejavnosti (ZZrID)”, 2021) in 2022, which transferred certain tasks of autonomous management of stable research funding to universities and other recipients of stable funding.

2 Historical Overview of Scientific Fields

2.1 Physical Sciences and Engineering (ERC PE)

The development of mathematics, natural sciences, and engineering at the University of Maribor dates back to 1859 with the Slovenian Theological School, with key milestones being the establishment of the Junior Technical College in 1959 and the start of classes in March 1960 in the departments of textiles, mechanical engineering, and electrical engineering. Due to the growing needs of industry for highly skilled personnel, the law on the Technical College was adopted in July 1973, enabling the implementation of the third year of mechanical engineering studies and later postgraduate programmes. Development continued with the introduction of study programmes in electrical engineering, mechanical engineering, and chemical engineering in the autumn of 1975, which strengthened the institution's research capacities. In 1995, the Technical Faculty was reorganized into four independent faculties, which, despite formal separation, maintained interdisciplinary cooperation.

In parallel with technical sciences, mathematics and natural sciences also developed. The first Doctor of Mathematical Sciences at the University of Maribor was Stane Indihar, who earned his doctorate in 1975, followed by Joso Vukman, who in 1980 published the first original scientific article in theoretical mathematics in an international journal. A significant milestone was the transformation of the Pedagogical Academy into the Faculty of Education in the mid-1980s, when the Department of Mathematics was strengthened in terms of staff, which had far-reaching consequences for the development of mathematics. Over time, strong research cores emerged at the university's faculties in the fields of functional analysis, algebra, graph theory, topology, geometry, and applied mathematics. Among the most important achievements is the theory of functional identities, which began to develop at the University of Maribor under the mentorship of Joso Vukman.

Research in physics began in 1960 with physics being taught as a fundamental subject at the Junior Technical College. A breakthrough year for the development of physics was 1986, when the Faculty of Education strengthened its staff with researchers from various fields of physics. Key roles were played by researchers such as Drago Bajc in mathematical physics, Milan Brumen in biophysics, and Samo Kralj in soft matter physics. In 1998, the accreditation of doctoral studies attracted numerous young researchers. The greatest global recognition was achieved by sociophysics

under the leadership of Matjaž Perc, who published more than 400 original scientific articles, cited over 50,000 times. Researchers in physics have developed strong ties with the Jožef Stefan Institute and the University of Ljubljana, while also representing key academic staff at numerous faculties of the University of Maribor, thereby strengthening interdisciplinarity and scientific integration.

2.2 Life Sciences (ERC LS)

The development of life sciences at the University of Maribor represents an important part of research activity, encompassing medicine and health sciences, biotechnology, and agriculture. The Faculty of Medicine was established as a research organization in 2005, when it was registered in the database of research organizations and began acquiring its own research projects. Under the leadership of Dean Ivan Krajnc and Vice-Dean for Research Dušica Pahor, the faculty advanced rapidly. The accreditation of the postgraduate programme Biomedical Technology in 2006 enabled the development of research staff, and the first doctoral dissertation was defended in the same year. By 2025, 137 students have completed doctoral studies. In 2007, the faculty began publishing an annual monograph and established the scientific journal *Acta medico-biotechnica*, the first medical journal published by a medical faculty in Slovenia, which has so far published 279 articles in 33 issues. Currently, the faculty hosts 10 research groups with 93 researchers and has participated in 68 European projects and 67 ARIS projects since 2006.

The tradition of the Faculty of Agriculture and Life Sciences dates back to the 1960s, when the Junior College of Agronomy was founded. In 2008, the faculty moved to Hompoš Castle in Hoče, significantly improving conditions for research work. Research is conducted in laboratories, the Botanical Garden, and on the estate of the University Agricultural Centre. A major milestone was the introduction of postgraduate studies in 2000/01 with the programme Agricultural Economics, later expanded with the programme Agronomy. To date, 13 doctoral students have completed pre-Bologna programmes, and 41 have completed third-cycle Bologna programmes. The faculty publishes the scientific journal *Agricultura*, established in 2002 and renamed *Agricultura Scientia* in 2023, with 139 articles published. In 2024, the faculty carried out 20 ARIS projects, 14 other national projects, and 5 international projects. The fundamental goal of research is the development of systems for producing safe and high-quality food in times of climate change.

The Faculty of Health Sciences established the first Institute for Nursing in Slovenia in 1996. Initially, research work was limited due to the lack of master's and doctoral programmes, as nursing was not yet recognized as a scientific discipline at the national level. The first doctoral programme in Nursing was accredited in 2016, marking a major milestone for the development of education and research. Since 2021, six students have earned doctoral degrees. Today, the faculty operates four institutes and three research groups with 41 researchers. Since 2005, the faculty has participated in 13 international projects and 10 ARIS projects. The faculty provides a stimulating research environment, including the Centre for Simulated Clinical Settings, the Centre for the Use of Augmented Reality in Healthcare, and a laboratory for microbiology and molecular biology. The faculty coordinates the programme core Data Science and Artificial Intelligence in Biomedicine, which connects various research groups and enables faster collaboration on research projects.

The study of biology and the related research work began at the former Pedagogical Academy as early as 1961. Two milestones in the development of life sciences were the establishment of the Faculty of Education in 1986 and the Faculty of Natural Sciences and Mathematics in 2006. Early research in botany and zoology, shaped by Ljerka Godicl and Marjanca Markič, has expanded and deepened significantly over the past decades, as today the work is organised within Chairs.

The Chair of Zoology focuses on taxonomic and ecological questions concerning mammals and selected groups of insects. The Chair of Animal Physiology and Ethology maintains a long tradition of research on model organisms, particularly wolf spiders, with which Dušan Devetak pioneered the field. The Chair of Geobotany is engaged in floristics, the vegetation ecology of grasslands and salt marshes, and landscape ecology, where the advanced use of GIS tools plays an important role. Under the leadership of Tone Novak, the Chair of Ecology studied subterranean ecosystems and cave fauna for many years, and today its research is primarily oriented towards interspecific interactions in the context of biological invasions. The Chair of Microbial and Molecular Biosciences is relatively new but is developing rapidly. The Chairs of Educational Chemistry and Biology Didactics build their fields at the intersection of the natural sciences and pedagogy, and under the leadership of Andrej Šorgo have achieved significant breakthroughs.

The faculty offers education at all three levels across several study programmes; at the first cycle, these include Teacher Education, Biology, and Ecology and Nature Conservation, among others. More than half of all FNM students are enrolled at the Department of Biology. Members of the department actively participate in conferences, organise international symposia, and successfully lead or carry out numerous national and European research and applied projects.

2.3 Social Sciences and Humanities (ERC SSH)

The development of social sciences and humanities at the University of Maribor represents an important pillar of academic activity, shaping the institution's distinctive identity over decades. Its roots go back to the late 1950s and early 1960s with the establishment of the Junior College of Economics and Commerce (1959) and the Pedagogical Academy (1961), which laid the foundation for the later development of social sciences and humanities. The Junior College of Economics and Commerce gradually evolved into the Faculty of Economics and Business, while the Pedagogical Academy became the Faculty of Education, which later transformed into several specialized faculties, including the Faculty of Arts and the Faculty of Natural Sciences and Mathematics.

In the field of economics, the establishment of postgraduate programmes played a key role in laying the groundwork for research activities. The Chair of Quantitative Economic Analyses became a hub for interdisciplinary collaboration between economics and mathematics, resulting in numerous applied research projects in econometrics, operations research, and financial mathematics. Gradually, research focus expanded to areas such as international business, strategic management, entrepreneurship, marketing, and sustainable development. The faculty established close cooperation with industry, enabling knowledge transfer and the development of innovative solutions for practical challenges. The creation of research institutes further strengthened scientific activity and facilitated the acquisition of national and international projects.

In the humanities and social sciences, the Faculty of Arts developed a rich research tradition encompassing linguistics, literary studies, history, art history, philosophy, sociology, psychology, translation studies, and pedagogy. Particularly significant are linguistic studies of the Slovenian language, where researchers contributed to the development of lexicography, dialectology, and corpus linguistics. Research in

German, English, Slavic, and Hungarian studies has fostered intercultural dialogue and understanding of linguistic interactions. In literary studies, research has focused on Slovenian literature, comparative literature, and literary theory, making a substantial contribution to understanding national and global literary heritage. Historical research has concentrated on regional history of Styria as well as broader areas, intercultural relations in Central Europe, and modern Slovenian history, from antiquity to the present day.

A major milestone in the development of social sciences was the establishment of the Faculty of Law in 1993, which developed research in constitutional, civil, criminal, and commercial law, with a special emphasis on European law and human rights (Univerza v Mariboru, Pravna fakulteta, n. d.). The Faculty of Criminal Justice and Security, founded in 2003, developed interdisciplinary research in criminology, security studies, and information security, combining legal, psychological, sociological, and technological approaches (Meško, 2023). In pedagogy and educational sciences, the Faculty of Education has developed innovative approaches to teaching and learning, with a strong focus on inclusive education and the use of modern technologies (Univerza v Mariboru, Pedagoška fakulteta, n.d.).

Social sciences and humanities at the University of Maribor are characterized by interdisciplinary connections, a regional approach, and international cooperation. Researchers actively participate in European research projects, publish in prestigious international journals, and contribute to the development of theoretical models and practical solutions for societal challenges. A special value lies in linking the tradition of the humanities with the challenges of the modern digital society, enabling the development of innovative research methods and approaches. The establishment of doctoral schools in social sciences and humanities has strengthened the training of young researchers, who continue and enhance the research tradition while introducing fresh ideas and approaches into research work.

3 Brief Overview by University of Maribor Members

The University of Maribor boasts an exceptional diversity of research orientations across its 17 members, together forming a comprehensive academic ecosystem. Each faculty develops its own unique research profile, with some maintaining traditions in the humanities and social sciences, while others focus on natural sciences, engineering, medicine, or biotechnical sciences. This diversity enables

interdisciplinary collaboration and knowledge transfer across fields, strengthening innovation and the university's relevance both nationally and internationally. Below, we present a detailed overview of individual members and their key characteristics.

Figure 5 shows the structural distribution of research activity across all 17 faculties of the University of Maribor, categorized by seven scientific disciplines, where the width of differently coloured segments represents the share of each discipline in the faculty's research profile. The analysis reveals a clear differentiation of faculties of the University of Maribor according to their research orientation – while the Faculty of Natural Sciences and Mathematics (FNM UM) and the Faculty of Chemistry and Chemical Engineering (FKKT UM) are strongly oriented in natural science, the Faculty of Energy Technology (FE UM), Faculty of Mechanical Engineering (FS UM), Faculty of Electrical Engineering and Computer Science (FERI UM), and Faculty of Civil Engineering, Transportation Engineering and Architecture (FGPA UM) are technically oriented. The Faculty of Health Sciences (FZV UM) and the Faculty of Medicine (MF UM) focus on medical research and the Faculty of Agriculture and Life Sciences (FKBV UM) specializes in biotechnology. Social sciences dominate at the Faculty of Law (PF UM), Faculty of Economics and Business (EPF UM), Faculty of Organizational Sciences (FOV UM), Faculty of Criminal Justice and Security (FVV UM), Faculty of Logistics (FL UM), and Faculty of Education (PEF UM). Humanities are most strongly represented at the Faculty of Arts (FF UM), while interdisciplinary research is most prominent at the Faculty of Tourism (FT UM) and FERI UM. This overview clearly illustrates both the specialization of certain faculties (e.g., FE UM is almost exclusively technically oriented, PF UM strongly social science-oriented) and the multidisciplinary of others (e.g., FNM UM, FKBV UM, FL UM). It highlights existing interconnections and research synergies among faculties and opportunities for fruitful collaboration within the university's research ecosystem.

For a more detailed insight and comparison among University of Maribor members regarding the diversity or interdisciplinarity of their research activity, we define the interdisciplinarity measure (Q) as the product of the entropies of the distribution of research activity by scientific disciplines ($H1$) and research fields ($H2$). This is weighted by the share of scientific disciplines ($w1$) and the share of research fields ($w2$) in which the member operates, so $Q = w1 * w2 * H1 * H2$.

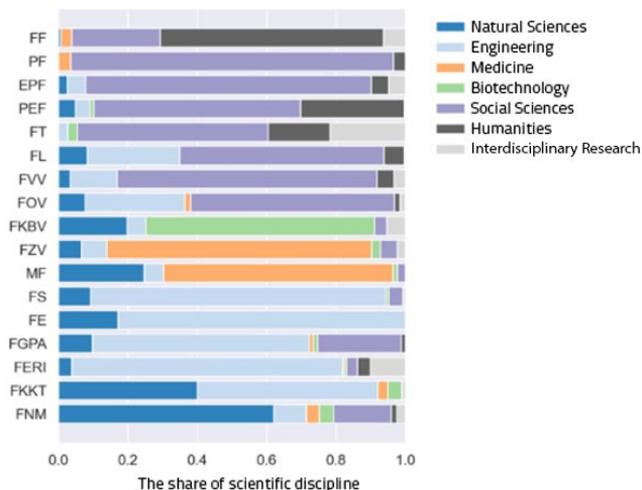


Figure 5: Distribution of research activity by faculties of the University of Maribor. The graph, in the form of stacked horizontal bars, shows the share of each scientific discipline in the research activity of each faculty. The profile of each faculty is calculated from data on the employment share of researchers at the faculty (University of Maribor personnel database) and data on the scientific discipline in which they operate (SICRIS). The legend on the right side of the graph colour codes the scientific disciplines: Natural Sciences, Engineering, Medicine, Biotechnology, Social Sciences, Humanities, Interdisciplinary research.

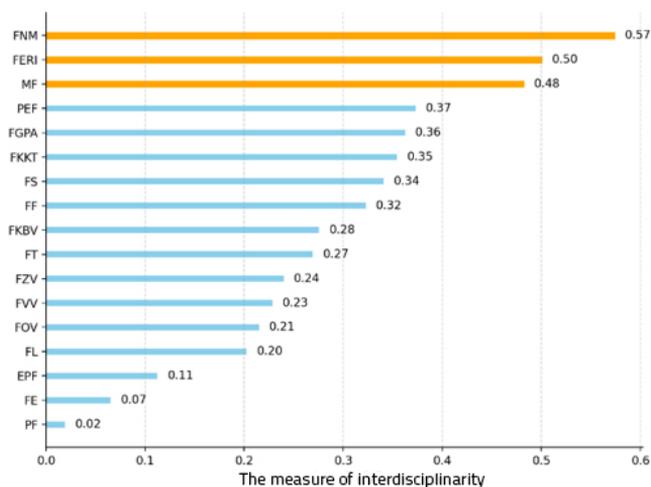


Figure 6: Comparison of interdisciplinarity among University of Maribor members. The measure of interdisciplinarity is calculated from the distribution of a member’s research activity across research fields and scientific disciplines; a higher number indicates a greater degree of interdisciplinarity. The measure of interdisciplinarity is on the horizontal axis.

Figure 6 shows the interdisciplinarity measures Q for all faculties of the University of Maribor. It turns out that, according to this measure Q , the most diversified research profiles are found at FNM UM, FERI UM, and MF UM, followed by PEF UM, while EPF UM, FE UM, and PF UM are strongly focused on their core research areas. In the following sections with descriptions of faculties, we will graphically present these research portfolios for individual faculties.

3.1 Faculty of Mechanical Engineering of the University of Maribor

The scientific research activity of the Faculty of Mechanical Engineering of the University of Maribor is distinguished by more than 30 successfully implemented basic and applied projects and participation in 9 research programmes since 1999 (Univerza v Mariboru, Fakulteta za strojništvo, n.d.). Figure 7 illustrates the research diversity of the faculty across different research fields.

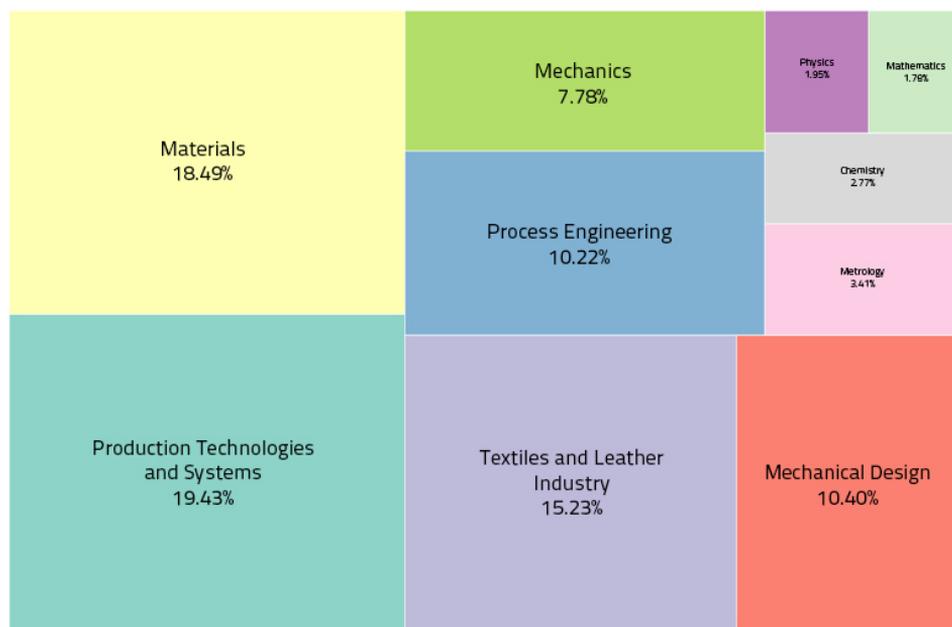


Figure 7: Distribution of research activity at the Faculty of Mechanical Engineering by research fields (the size of each field reflects the share of research activities in that area). The main research fields are Manufacturing Technologies and Systems, Materials, Textiles and Leather, Mechanical Design, Process Engineering, and Mechanics.

The faculty's research excellence is evident in its successful acquisition of European funding from programmes FP6 (7 projects), FP7 (9 projects), H2020 (8 completed), and Horizon Europe (5 ongoing), as well as other projects. Research output includes 2,511 scientific works in the last decade, including 634 articles in recognized journals, 24 monographs, and 19 international patents. The Research Club of the Faculty of Mechanical Engineering, established in 2023, has strengthened the faculty's research capacity by promoting interdisciplinary projects and connecting young researchers, to whom the faculty has enabled the acquisition of more than 240 doctorates over the past twenty years. Modern research infrastructure forms the foundation for excellent research: a field emission scanning electron microscope – FEG SEM with EDX and SXES spectrometer, an experimental system for compounding nano- and microstructural polymer composites and metallic glasses, servo-hydraulic machines for uniaxial and flexible biaxial testing with freestanding actuators for static and dynamic tests at low and elevated temperatures, a system for characterizing zeta potential and particle size in dispersions and zeta potential on solid materials, an indentation tester, a fully automated device for coating flat substrates with various technological systems and drying methods in the same unit, etc. The Faculty of Mechanical Engineering at UM is active not only in research but also in organizing important national and international conferences. Among the most recognized events are the International Conference on Fluid Technology, the International Conference NANOAPP, Welding Technology and Industrial Robotics Day, and others that promote knowledge exchange among experts and researchers. Researchers at the UM Faculty of Mechanical Engineering are recipients of various awards and recognitions in the field of research activity.

3.2 Faculty of Electrical Engineering and Computer Science of the University of Maribor

The scientific research work of FERI UM is based on six core research programmes addressing advanced technologies of optical sensors, radar systems, electromagnetic converters, energy efficiency, and the development of digital twins (Univerza v Mariboru, Fakulteta za elektrotehniko, računalništvo in informatiko, n.d.). Figure 8 shows the research diversity of FERI UM.

The faculty's research impact is reflected in numerous internationally recognized achievements: development of miniature optical pressure sensors for USAF, contactless angle measurement devices in the Magneliq project, and patented

technologies for industry. In the CONCORDIA and CyberSec4Europe (H2020) projects, the faculty contributed to establishing the European Cybersecurity Competence Centre, developed a one-stop-shop platform for SME access to AI services (AI REGIO), and created key open-access Slovenian speech corpora, confirming its exceptional research reach. Other key EU projects include HYPSTAIR for hybrid aircraft propulsion development, ROBOTool-1 for cognitive robotic systems, and in H2020 Persist and HosmartAI projects, the role of artificial intelligence in medical communication and rehabilitation was explored. The INDY project (EDF) improves energy efficiency in military bases, while the NEDO project, in cooperation with ELES, developed advanced functionalities for closed-loop operation of power systems. The ARACNE project (HE) connects the European silk industry into an innovation ecosystem. FERI UM is also active in agroecological monitoring in East Africa through the PrAEctiCe (HE) project and in developing neural interfaces for rehabilitation in the HE project HybridNeuro. In the VegeLine project, they developed a tool for digital vegetation management of power lines, which received the SRIP GoDigital award. Another notable project is Audience Transformation, which analysed changes in media habits in cooperation with major Slovenian media outlets.

Significant milestones include the development of the first Slovenian nanosatellites TRISAT, launched into orbit in 2020 and still operating successfully today. Another recent achievement is the establishment of a laboratory for research and development of optical fibres with all technological processes for fibre production. The faculty achieves high international visibility in research, as confirmed by its most cited scientific article, which has more than 2,900 citations in the Scopus database. FERI UM researchers have received numerous awards and recognitions for research achievements, such as the WIPO Medal for Inventors (2025), eAward for the EduCTX digital platform (2019), ARCA Gold Medal (2020), Donald Michie and Alan Turing Award for Lifetime Achievements (2029, 2024), Danubius Young Scientist Award (2015, 2016), Excellent in Science (2013), Prometheus of Science, university awards, and others.

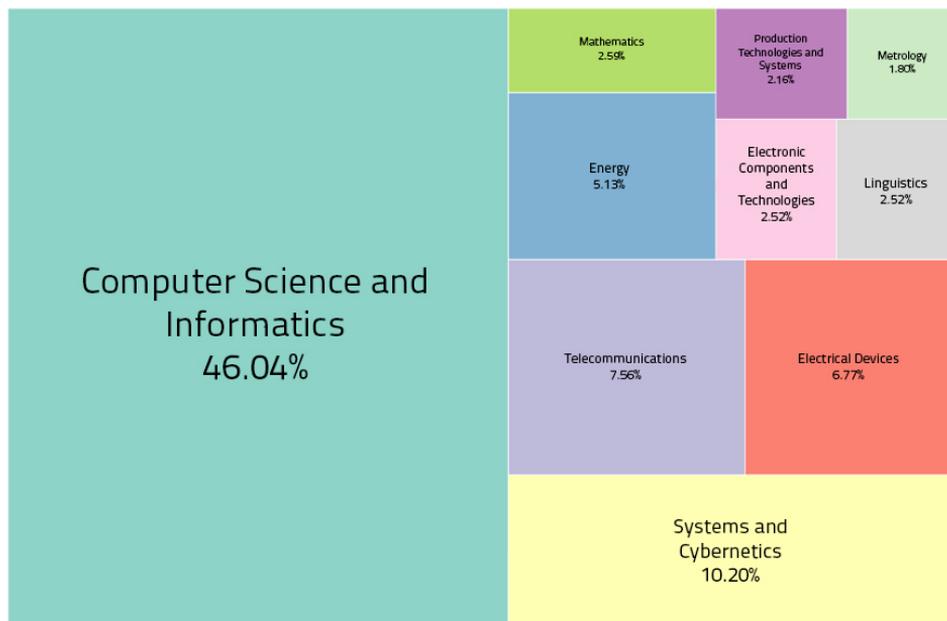


Figure 8: Distribution of research activity at FERI UM by research fields (the size of each field reflects the share of research activities in that area). The main research fields are Computer Science and Informatics, Systems and Cybernetics, Telecommunications, Electric Devices, and Energy Engineering.

3.3 Faculty of Civil Engineering, Transportation Engineering and Architecture of the University of Maribor

The scientific research work of FGPA UM focuses on the core research programme Development, Modelling, and Optimization of Structures and Processes in Civil Engineering and Transport, which develops sustainable and interdisciplinary solutions. The faculty achieves international recognition through participation in European research associations EUCEET and ELGIP and by publishing the scientific journal *Acta Geotechnica Slovenica*, which is indexed in top scientific databases (Univerza v Mariboru, Fakulteta za gradbeništvo, prometno inženirstvo in arhitekturo, n.d.). Figure 9 shows the research diversity of FGPA UM.

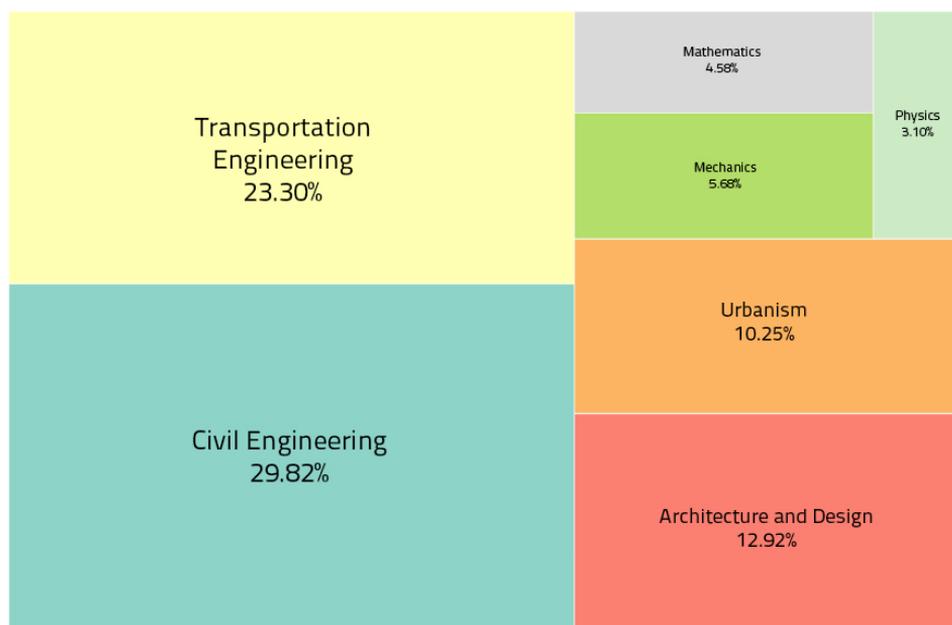


Figure 9: Distribution of research activity at FGPA UM by research fields (the size of each field reflects the share of research activities in that area). The main research fields are Transportation Engineering, Civil Engineering, Architecture and Design, Urbanism, and Mechanics.

The research approach of FGPA UM is based on connecting traditional fields of civil engineering and transport with innovative approaches in architecture, enabling the development of comprehensive solutions for complex spatial challenges and the circular economy.

Researchers at FGPA UM are recipients of awards and recognitions in research, such as Excellent in Science, Zois Award, Plečnik Medals, university awards, and others.

3.4 Faculty of Chemistry and Chemical Engineering of the University of Maribor

The scientific research activity of the faculty is carried out in eleven research groups organized into nine programme groups, which in 2024 alone led or participated in 43 basic and applied ARIS projects (Univerza v Mariboru, Fakulteta za kemijo in kemijsko tehnologijo, n.d.). Figure 10 illustrates the research diversity of the faculty across different research fields.

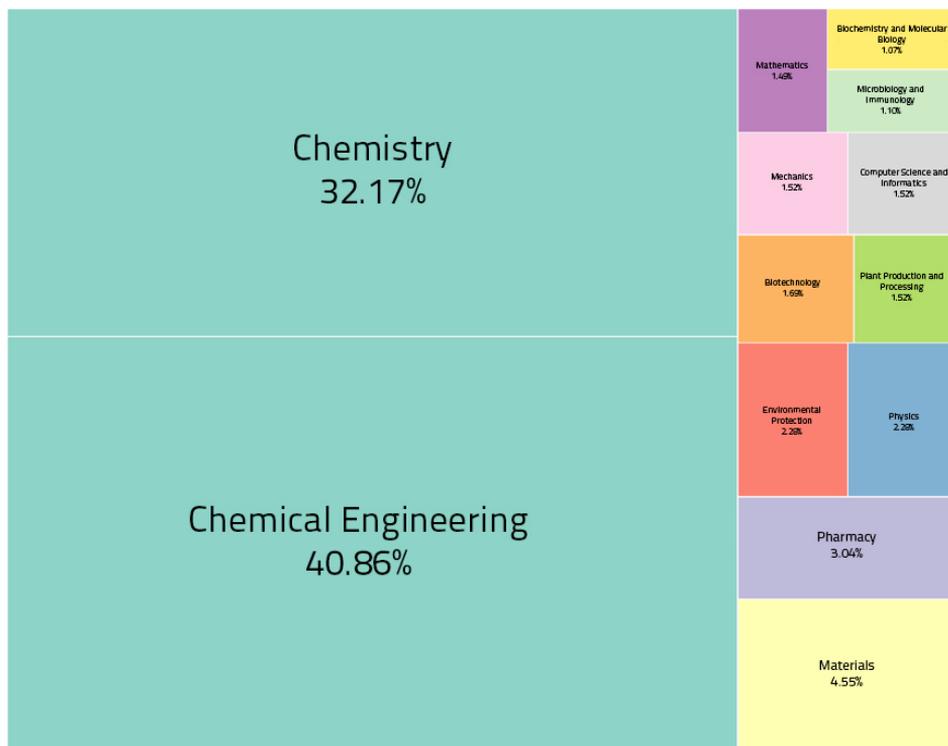


Figure 10: Distribution of research activity at FKKT UM by research fields (the size of each field reflects the share of research activities in that area). The main research fields are Chemical Engineering, Chemistry, Materials Science and Engineering, and Pharmacy.

The faculty's international research excellence is confirmed by successful acquisition of EU programme projects – FP6, FP7, the SCF Centre of Excellence, and several ongoing H2020 and Horizon Europe projects. Researchers also participate in many other national and international projects. The faculty's impressive scientific output is reflected in the growth of its h-index from 81 to 116 and the doubling of citation counts (from 5,174 to 10,434 according to WoS and from 5,917 to 12,011 according to Scopus) during the period 2015–2024. According to SICRIS indicators normalized per researcher, the faculty ranks at the very top in Slovenia in the fields of chemistry and chemical engineering. Researchers at FKKT UM have received numerous awards and recognitions for research achievements, such as the Selingman APV Fellowship/Bursary in Food Engineering (1997, UK), the American Oil Chemists' Society Prize (AOCS prize) (1997, USA), Innovationspreis Messer Griesheim Preis (1998), the Russian Academy of Sciences and M.V. Lomonosov Moscow State University distinction "In Memory of Academician N.M. Emanuel"

(2018), and honorary membership in the Society of University Professors. The faculty is home to numerous recipients of Zois Awards and recognitions, as well as lifetime achievement awards.

3.5 Faculty of Natural Sciences and Mathematics of the University of Maribor

The scientific research activity of the faculty is organized into internationally recognized research groups in the fields of mathematics, physics, and biology (Univerza v Mariboru, Fakulteta za naravoslovje in matematiko, n.d.). Figure 11 illustrates the research diversity of the faculty across different research fields.

In mathematics, the faculty has achieved notable results with the theory of functional identities (Brešar-Beidar-Čebotar theory), considered one of the most important theories of the last thirty years in ring theory, which originated at the University of Maribor. The excellence of mathematical research is demonstrated by nine Zois Awards and recognitions granted to mathematicians of the University of Maribor between 1990 and 2023. In physics, the greatest breakthrough was achieved by the sociophysics group, which placed the University of Maribor on the global map with more than 400 original scientific articles and 50,000 citations. Physics research also includes biophysics, soft matter physics, and educational physics. For their research in physics, researchers have received numerous national and international awards, including the Zois Award and recognition, Blinc Award, Young Scientist Award for Socio and Econophysics from the German Physical Society, USERN Award, honorary membership in the American Physical Society, membership in the European Academy of Sciences and Arts, and others. The faculty achieves high international visibility in research, as confirmed by the inclusion of a researcher among the top 1% most cited physicists in the world, first in 2024 and then every year since 2018. Biological research is conducted in eight specialized departments, where researchers focus on botany, zoology, animal physiology, ecology, microbial and molecular biosciences, and didactics. An important part of the activity is the Institute for Biology, Ecology, and Nature Conservation. The faculty is characterized by strong international integration, leadership of numerous projects, and participation in international consortia such as the European infrastructure consortium LifeWatch ERIC. Researchers in biology have received multiple awards and recognitions and have participated in organizing several internationally renowned scientific conferences.

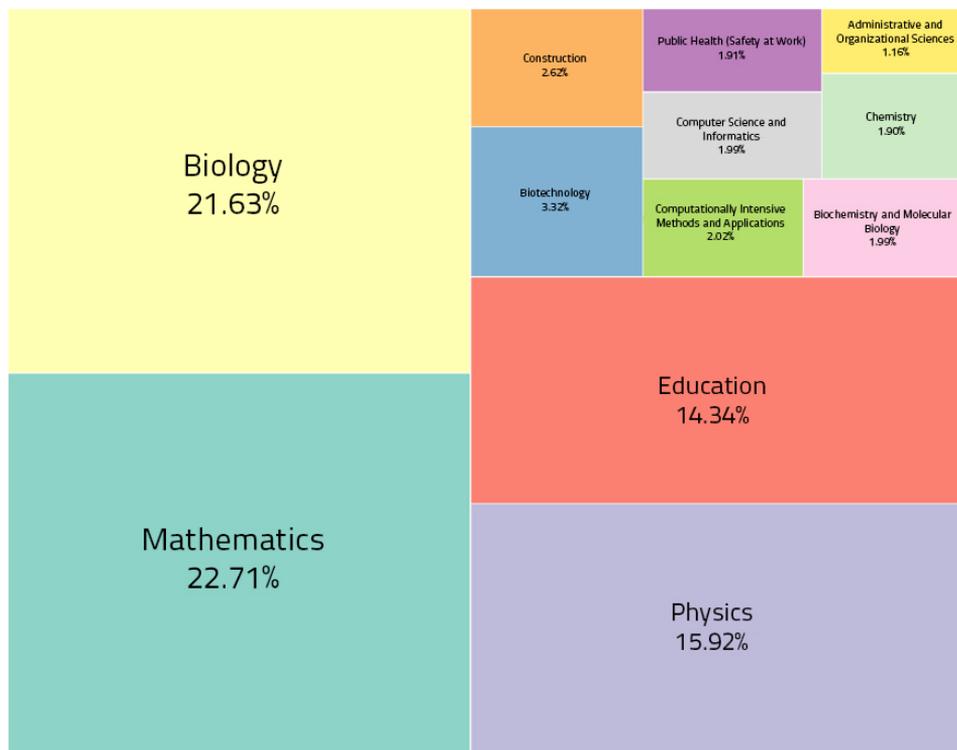


Figure 11: Distribution of research activity at FNM UM by research fields (the size of each field reflects the share of research activities in that area). The main research fields are Mathematics, Biology, Physics, and Educational Studies.

3.6 Faculty of Logistics of the University of Maribor

The scientific research activity of FL UM takes place in four specialized laboratories: for quantitative modelling in logistics, cognitive systems in logistics, sustainable mobility and transport, and management in logistics and supply chains (Univerza v Mariboru, Fakulteta za logistiko, n.d.). Figure 12 illustrates the research diversity of the faculty across different research fields.

The faculty achieves high international visibility in research, as confirmed by the inclusion of a researcher in the list of the top 2% most influential researchers globally according to Stanford and Elsevier criteria. The research priority of the faculty is the implementation of projects aligned with the Smart Specialization Strategy (S5), with an emphasis on multimodality, smart cities, digitalization of logistics processes, and

the circular economy. In 2024, researchers obtained the first basic research project on the safety of electric micromobility in urban environments and funding to strengthen programme cores. The faculty publishes the scientific journal *Logistics, Supply Chain, Sustainability and Global Challenges*, which it aims to include in the international Scopus database in the future.

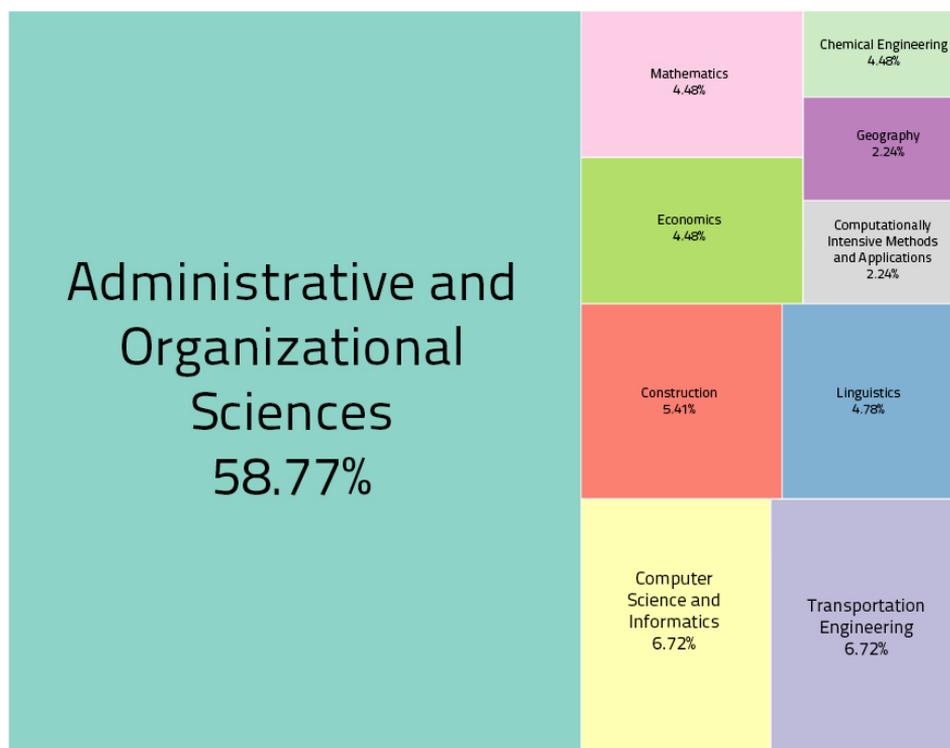


Figure 12: Distribution of research activity at FL UM by research fields (the size of each field reflects the share of research activities in that area). The main research fields are Administrative and Organisational Sciences, Computer Science and Informatics, and Transportation Engineering.

3.7 Faculty of Energy Technology of the University of Maribor

The scientific research activity of FE UM is focused within the Research Group of the Institute of Energy Technology, which conducts research in ten specialized laboratories: for energy management, alternative energy technologies, thermomechanics, nuclear energy, virtual engineering, energy conversions, dynamic

systems, electric machines, applied electrical engineering, and environmental protection (Univerza v Mariboru, Fakulteta za energetiko, n.d.). Figure 13 illustrates the research diversity of the faculty across different research fields.

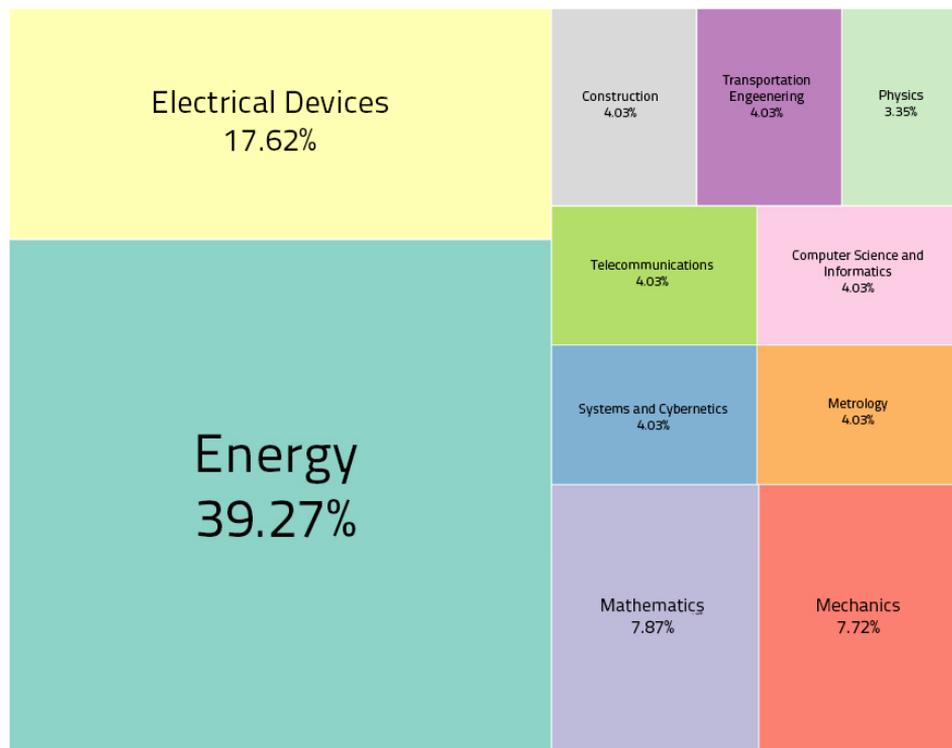


Figure 13: Distribution of research activity at FE UM by research fields (the size of each field reflects the share of research activities in that area). The main research fields are Energy Engineering, Electrical Devices, Mathematics, and Mechanics.

Between 2021 and 2023, the faculty upgraded its research infrastructure with state-of-the-art equipment through the project Upgrading National Research Infrastructures – RIUM. The high quality of research work is reflected in publications in prestigious international journals, participation in programme groups of the University of Maribor and the Jožef Stefan Institute, and prestigious awards such as the Bedjanič Award for doctoral work in 2024.

3.8 Faculty of Economics and Business of the University of Maribor

In the field of social sciences, the first research institute – the Institute for Marketing – was established in 1969 at the then VEKŠ as a centre for introducing students to research, developing projects for industry, and providing consulting services. Another milestone was the establishment of the Computer Centre in 1977, which strengthened the integration of computing into research.

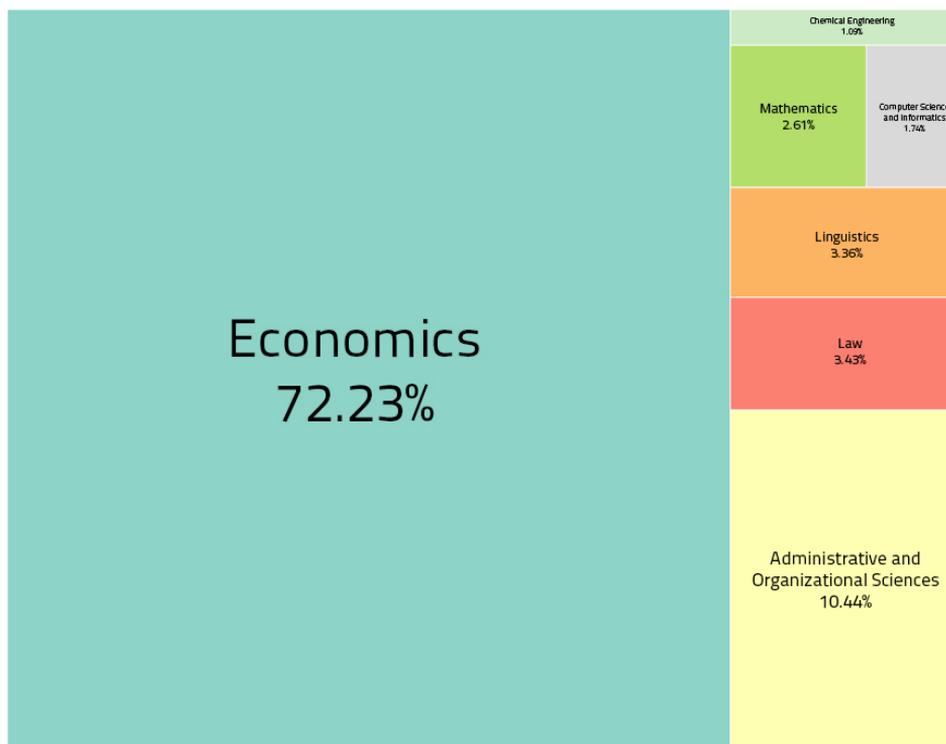


Figure 14: Distribution of research activity at EPF UM by research fields (the size of each field reflects the share of research activities in that area). The main research fields are Economics, Administrative and Organisational Sciences, and Law.

The transformation into EPF UM in 1989 gave new impetus to research; today, 15 institutes operate with 78 researchers implementing two key research programmes with a strong interdisciplinary approach and international integration (Univerza v Mariboru, Ekonomsko-poslovna fakulteta, n.d.). Figure 14 illustrates the research diversity of the faculty across different research fields.

In 2024, the faculty established an advanced laboratory for quantitative risk management, introducing innovative approaches to big data analysis, focused on promoting sustainable development and social responsibility.

3.9 Faculty of Arts of the University of Maribor

The development of research in the humanities and social sciences is linked to the establishment of the Pedagogical Academy in 1961, which became one of the founding members of the University of Maribor in 1975 and grew into a large Faculty of Education in 1986, and even more so after 2006, when it was divided into three smaller faculties (PEF UM, FNM UM, FF UM) (Univerza v Mariboru, Filozofska fakulteta, n.d.). Figure 15 illustrates the research diversity of the Faculty of Arts across different research fields.

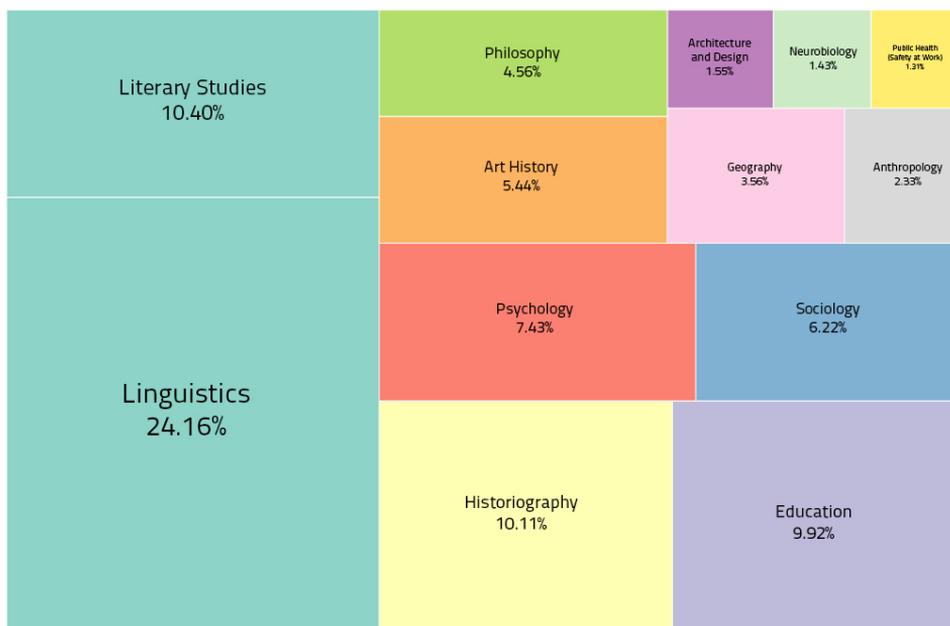


Figure 15: Distribution of research activity at FF UM by research fields (the size of each field reflects the share of research activities in that area). The main research fields are Linguistics, Literary Studies, Historiography, Educational Studies, Psychology, Sociology, Art History, and Philosophy.

The Faculty Institute for Scientific Research comprises 10 research groups with 136 researchers. Four research programmes are implemented at FF UM. The number of acquired ARIS projects (including two large ones), international projects, and other projects has significantly increased. At the Department of History alone, there have been or are currently 15 ARRS/ARIS scientific research projects, including 4 postdoctoral and 1 so-called large project (bringing together ten partner institutions); a total of 42 members of the Department have participated or are still participating in these projects. Additionally, 24 members of the Department have participated or are currently participating in 13 ARRS/ARIS projects led/coordinated by other institutions. FF develops relevant fundamental research in the humanities and social sciences while increasingly working in an interdisciplinary manner (e.g., projects ZELEN.KOM and in the field of heritage science AID HCH).

3.10 Faculty of Education of the University of Maribor

In 1975, at the Pedagogical Academy, the predecessor of the Faculty of Education, the Centre for Development and Research was established, which was renamed the Research Institute in 1986 and later the Scientific Institute.

Until 2006, research activity was well developed in the fields of social sciences, humanities, natural sciences, and mathematics (Univerza v Mariboru, Pedagoška fakulteta, n.d.). Figure 16 illustrates the research diversity of the faculty across different research fields.

After the division of the Faculty of Education into three faculties, the Faculty of Education began developing research activity in the field of social sciences – educational sciences – and started publishing the *Journal of Elementary Education*, indexed in Scopus since 2020.

In recent years, in addition to projects and programmes funded by ARIS, the faculty has been implementing RRP projects, and the EDUMLAB research group represents the central research group. A laboratory for kinesiology has also been established.

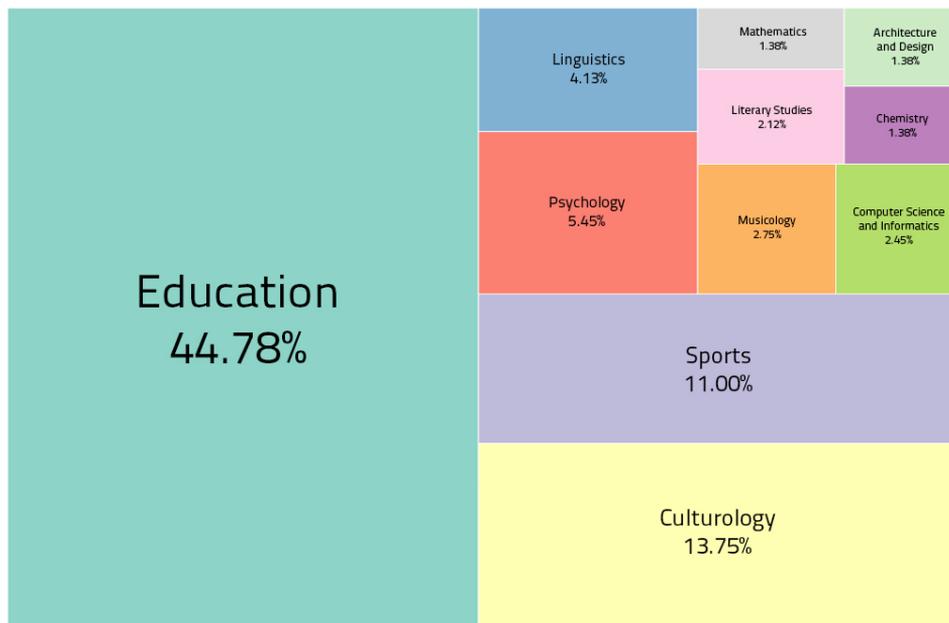


Figure 16: Distribution of research activity at PEF UM by research fields (the size of each field reflects the share of research activities in that area). The main research fields are Educational Studies, Culturology, and Sports.

3.11 Faculty of Organizational Sciences of the University of Maribor

The research activity of the Faculty of Organizational Sciences, characterized by interdisciplinarity, takes place at the Institute for Organization and Management and the Research Centre, in the form of research and development projects and the faculty's research programmes. At the same time, cooperation with industry and the broader local community is one of the most important segments of research activity – collaboration with partner universities, companies, the public sector, and organizations in the region and beyond reflects the orientation toward a sustainable, socially responsible, and open faculty (Univerza v Mariboru, Fakulteta za organizacijske vede, n.d.). Figure 17 illustrates the research diversity of the faculty across different research fields.

An important component of research work is also the presentation of research results and achievements. Research areas at FOV UM include organization and management, human resources and educational systems, business and work systems engineering, information systems, crisis management, and asset management.

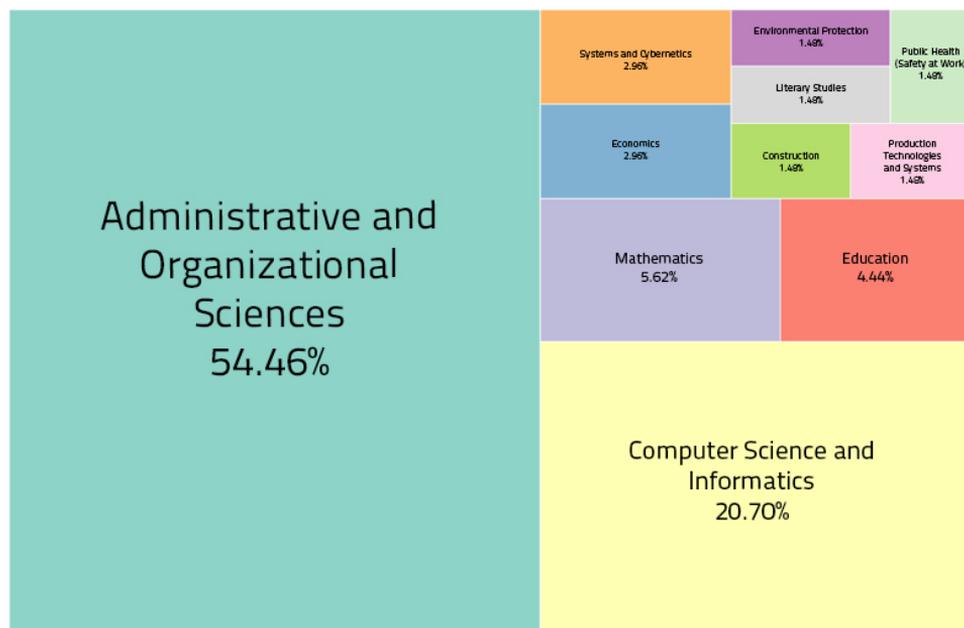


Figure 17: Distribution of research activity at FOV UM by research fields (the size of each field reflects the share of research activities in that area). The main research fields are Administrative and Organisational Sciences, Computer science and Informatics, Mathematics, and Educational Studies.

3.12 Faculty of Law of the University of Maribor

The Faculty of Law ranks among the leading research institutions in the field of law in Slovenia. Its research work is strongly integrated into the international environment. The faculty conducts basic and applied research in various areas of law (Univerza v Mariboru, Pravna fakulteta, n.d.). Figure 18 illustrates the research diversity of the faculty across different research fields.

Most employees are involved in the PF UM programme group, while research is funded from public and private sources, recently through the ARIS project Everyone is in Services (2024), the Jean Monnet project on fundamental rights in business law (2021), and the EU-En4s project on cross-border debt recovery (EU Justice, 2019). Students are actively involved in research activities. Through publishing, the faculty significantly contributes to the development of legal science, striving to protect the rule of law both in Slovenia and the EU.

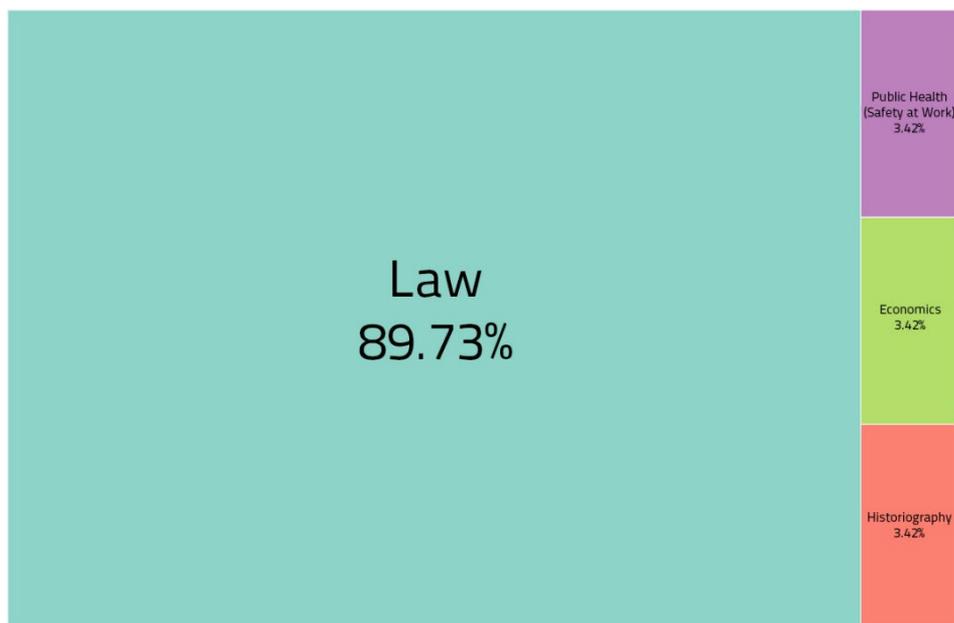


Figure 18: Distribution of research activity at PF UM by research fields (the size of each field reflects the share of research activities in that area). The main research field is Law.

3.13 Faculty of Criminal Justice and Security of the University of Maribor

After 2004, with its integration into the University of Maribor and the establishment of the Institute of Security Studies, research became a more intensive and internationally oriented activity. Today, the Institute carries out basic, applied, development, and other projects within national and international research programmes (Univerza v Mariboru, Fakulteta za varnostne vede, n.d.; Meško, 2023). Figure 19 illustrates the research diversity of the faculty across different research fields.

The faculty's research activity covers a wide range of areas, such as criminology, law, security management, information security, psychology, sociology, criminalistics, and policing. Since 2015, a large part of research activities has taken place within the programme group Security in Local Communities (Meško & Hacin, 2024). Research has focused on addressing societal challenges such as crime, ensuring security and human rights, as well as cybersecurity.

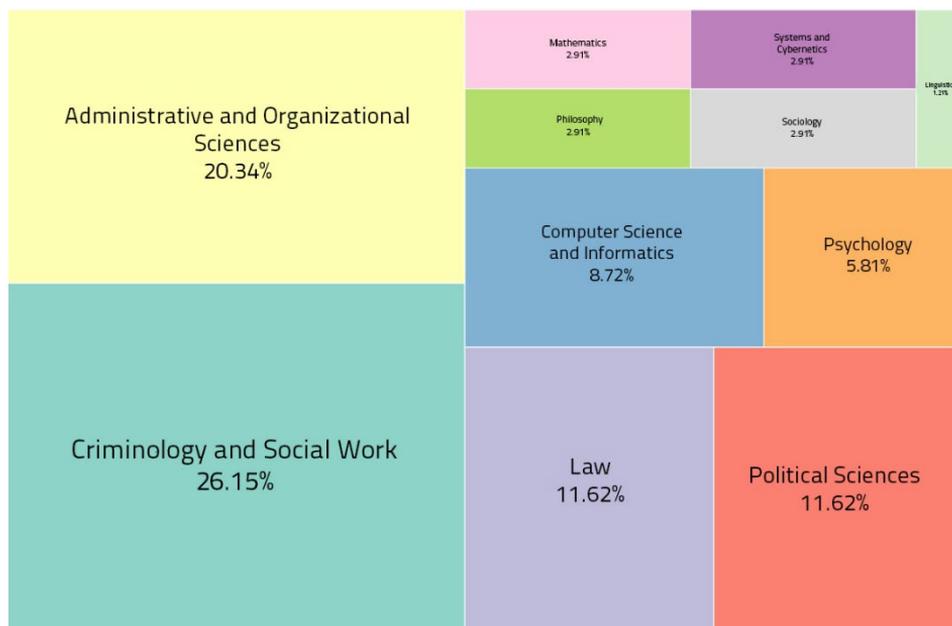


Figure 19: Distribution of research activity at FVV UM by research fields (the size of each field reflects the share of research activities in that area). The main research fields are Criminology and Social Work, Administrative and Organisational Sciences, Law, Political Sciences, and Computer Science and Informatics.

3.14 Faculty of Tourism of the University of Maribor

At the heart of research at one of the youngest members is tourism, which established its first research institute – the Institute for Tourism – in 2015. An interdisciplinary perspective on tourism is central to more than 90 research and development projects that successfully involve students, international partners, and industry (Univerza v Mariboru, Fakulteta za turizem, n.d.). Figure 20 illustrates the research diversity of the faculty across different research fields.

Since 2020, the results of targeted and basic research projects have attracted the interest of the broader professional, academic, and general public, positioning the faculty among prominent research institutions in Slovenia and worldwide.

Critical thinking and social responsibility are at the core of research at the Faculty of Tourism. Contemporary challenges related to the role of tourism in environmental and social changes are topics that researchers approach with a critical and interdisciplinary stance.

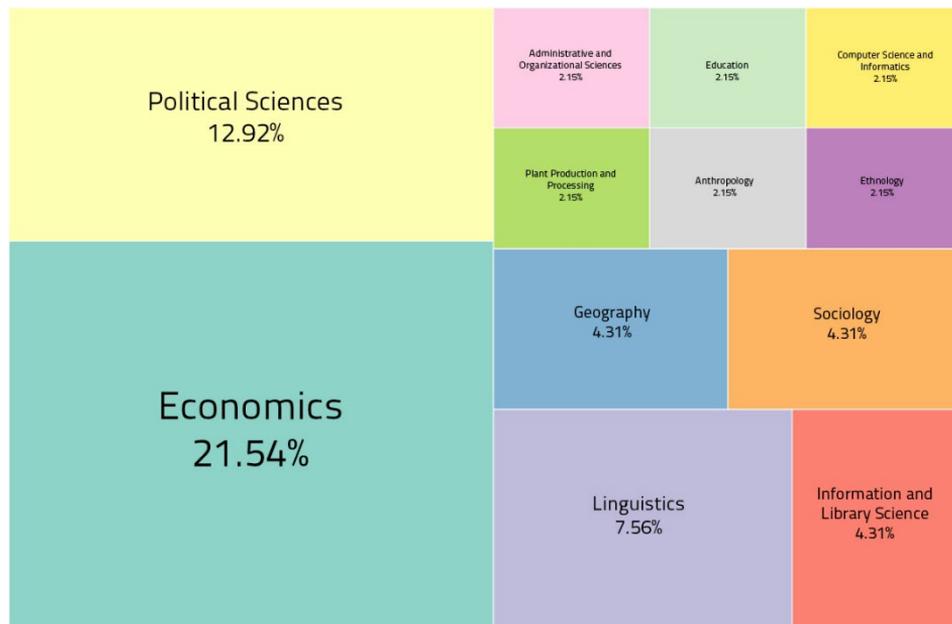


Figure 20: Distribution of research activity at FT UM by research fields (the size of each field reflects the share of research activities in that area). The main research fields are Economics, Political Sciences, and Linguistics.

3.15 Faculty of Medicine of the University of Maribor

The scientific research activity of the Faculty of Medicine officially began with its registration in the research organizations database in 2005. Research work developed rapidly with the accreditation of the postgraduate programme Biomedical Technology and the recruitment of top researchers. The faculty currently operates 10 research groups with 93 researchers and 15 professional associates. In its twenty years of existence, MF UM has participated in 68 European projects (as the leading organization in 39) and 67 ARIS projects (as the leading organization in 29) (Univerza v Mariboru, Medicinska fakulteta, n.d.). Figure 21 illustrates the research diversity of the faculty across different research fields.

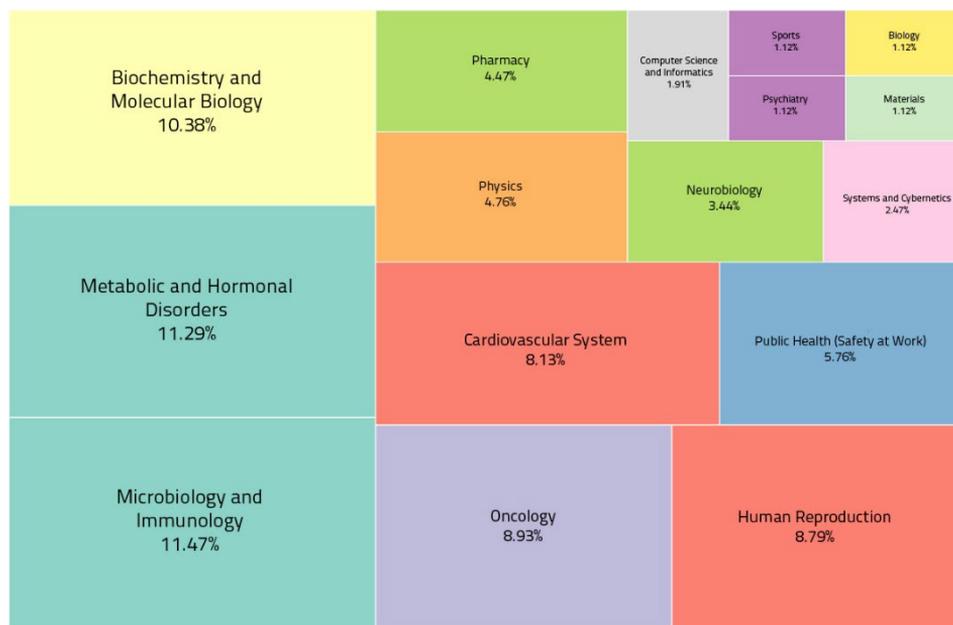


Figure 21: Distribution of research activity at MF UM by research fields (the size of each field reflects the share of research activities in that area). The main research fields are Microbiology and Immunology, Metabolic and Hormonal Disorders, Biochemistry and Molecular Biology, Oncology, Human Reproduction, and Cardiovascular System.

A significant milestone was the establishment of the scientific journal *Acta medico-biotechnica* in 2007, the first medical journal published by a medical faculty in Slovenia, which has twice received the Prometheus of Science Award for excellence in communication. The faculty systematically promotes student research through calls for research assignments for the Dean's Awards, granted since 2007; by 2025, 55 Dean's Awards and 10 Perlach Awards have been presented.

3.16 Faculty of Agriculture and Life Sciences of the University of Maribor

The scientific research activity of the faculty has its roots in the establishment of the Junior College of Agronomy in the 1960s. A key development milestone was the relocation to Hompoš Castle in Hoče in 2008, where laboratories were set up and conditions for research work significantly improved (Univerza v Mariboru, Fakulteta za kmetijstvo in biosistemske vede, n.d.). Figure 22 illustrates the research diversity of the faculty across different research fields.

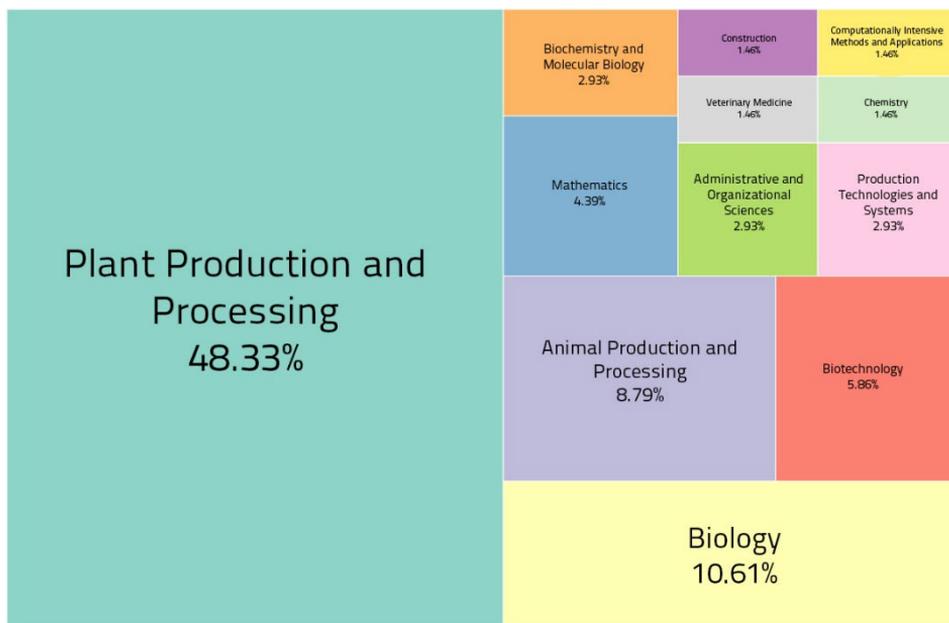


Figure 22: Distribution of research activity at FKBV UM by research fields (the size of each field reflects the share of research activities in that area). The main research fields are Plant Production and Processing, Biology, Animal Production, and Biotechnology.

The research infrastructure includes laboratories, the University of Maribor Botanical Garden, and the estate of the University Agricultural Centre, which enables outdoor experiments. Since 2003, 54 doctoral students have earned their PhDs at the faculty, including 28 young researchers. In the last three years, funding for project activities has more than doubled. In 2024, the faculty carried out 20 ARIS projects, 14 other national projects, and 5 international projects, including 4 from the Horizon programme. Since 2002, the faculty has published the scientific journal *Agricultura* (renamed *Agricultura Scientia* in 2023), in which 139 scientific articles have been published.

3.17 Faculty of Health Sciences of the University of Maribor

The scientific research activity of the faculty began with the establishment of the first Institute for Nursing in Slovenia in 1996, dedicated to interdisciplinary research. Today, the faculty operates four institutes and three research groups with 41 researchers (Univerza v Mariboru, Fakulteta za zdravstvene vede, n.d.). Figure 23 illustrates the research diversity of the faculty across different research fields.



Figure 23: Distribution of research activity at FZV UM by research fields (the size of each field reflects the share of research activities in that area). The main research fields are Public Health (Safety at Work), Microbiology and Immunology, and Computer Science and Informatics.

A key development milestone was the establishment of the first doctoral programme in Nursing in Slovenia (2016), which enabled a full education vertical and contributed to the development of research. Since 2005, the faculty has participated in 13 international and 10 ARIS projects, acting as the leading organization in 13 cases. In the past ten years, more than 200 students have been involved in 31 student projects. The faculty provides a stimulating research environment, including the Centre for Simulated Clinical Settings, the Centre for the Use of Augmented Reality in Healthcare, and a laboratory for microbiology and molecular biology. International recognition is confirmed by awards received by researchers (UNEP, Fulbright, DAAD, DARPA) and active participation in the UDINE-C group.

4 Artistic Activity

Artistic activity at the University of Maribor plays an important role in the comprehensive development of the academic environment, even though the university does not yet have its own Academy of Arts. The university recognizes art

as a parallel and autonomous reality that broadens and enriches our perception of the world and represents an essential civilizational value.

In the field of music, the University of Maribor has achieved remarkable success and international recognition. Prominent positions are held by recipients of the Prešeren Award, such as Tomaž Svete and Nina Šenk, who were also awarded at the international opera competition Johann-Joseph-Fux – the former in 2000 for the philosophical opera *Kriton*, the latter in 2021 for the opera *Canvas*. The university's reputation has also been significantly enhanced by outstanding musical creators and educators: composer Darijan Božič, choir conductors Branko Rajšter and Jože Fürst, composer Jože Gregorc, conductors Stane Jurgec and Simon Robinson, and opera singers Ondina Otta Klasinc and Dragica Kovačič.

In the field of visual arts, UM cultivates a rich tradition, with Prešeren Award recipient Oto Rimele (2004) among its distinguished artists. At the Faculty of Education, where the study programmes in Art Education and Music Education are offered, renowned artists and educators are active. The Department of Fine Arts, dating back to 1961, has strengthened its role in the development of visual arts in the region through the work of artists such as Anka Krašna, Breda Varl, Vlasta Tihec, Bogdan Čobal, and Dragica Čadež (Prešeren Award recipient). Today's academic staff includes established artists: Alja Košar, Petra Varl, Tanja Verlak, Darko Golija, Samuel Grajfoner, Matej Koren, Robert Lozar, Dušan Zidar, and Oto Rimele. Despite the fact that the proposal for the establishment of the Academy of Arts at UM was prepared in the mid-2000s and the academy was formally established in 2011, challenges remain in securing premises and funding for its actual operation. The academy would enable study programmes in the fields of visual arts, music, and performing arts, filling a gap in northeastern Slovenia. Its establishment was also envisaged in the programme of the European Capital of Culture Maribor 2012 but was not realized.

The University of Maribor recognizes science and art as fundamental aspects of its civilizational mission, enabling the holistic development of individuals and contributing to the common good. Artistic activity at the university is not only part of the educational process but also makes an important contribution to European and global cultural heritage.

5 Conclusion and Vision for the Future

The scientific and artistic journey of the University of Maribor is marked by a persistent rise in excellence and international recognition. The university has become an important centre of knowledge and creativity in the wider region, with its researchers and artists contributing to the development of science and art at both national and international levels. Strategic programme cores – Artificial Intelligence and Data Science in Biomedicine, Materials and Technologies, and Heritage Science and Climate Change – have become the central pillars around which research activities of various faculties and departments are interconnected.

The development vision is based on further strengthening of the interdisciplinary approach, greater integration with industry, cultural institutions, and society at large, as well as intensive international cooperation. Special attention is devoted to research and artistic creation addressing global challenges – from climate change and sustainable development to social transformations and cultural identities. In the future, programme cores will increasingly act as integrative mechanisms that foster collaboration and enable the crossing of traditional disciplinary boundaries, thereby enhancing the university's research potential and its impact on solving complex societal challenges. The long-term strategy for developing research infrastructure foresees substantial investments in selected strategic capacities (AI Factory, HB SAXS synchrotron beamline), which will support all three programme cores and strengthen international partnerships.

The University of Maribor will maintain, consolidate, and develop a sustainable, connected, empowered, and efficient network of professional support for research, artistic, and project activities, reinforcing professional staff and supporting their expertise and career development both at the rectorate and faculty level. In a broader sense, this will also contribute to greater visibility, recognition, and acknowledgement of the demanding profession of Research Manager and Administrator in the national and European context.

Through its scientific and artistic work, the University of Maribor consolidates its position as a creator of knowledge and culture, building bridges between disciplines, academia, industry, and art, and acting as an equal partner in the international arena.

Data availability: The data and code used in this chapter are openly available at <https://github.com/deankorosak/sciart>.

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THE ROLE AND POSITION OF STUDENTS AT THE UNIVERSITY OF MARIBOR

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Students are a key part of the University of Maribor, which would not exist in principle without them. Over the decades, the number of students has grown and today there are more than 15,000 students studying at the University of Maribor. Their involvement in activities to represent student interests and develop extracurricular activities at the local and national level has been ever-present. The latter plays an important role as it contributes to the development of competences, social networks and the quality of student life. Student representation, particularly through student councils, ensures the representation of students' rights and interests and enables their participation in decision-making. The University of Maribor enables students to participate in governance, as representatives are present in all decision-making bodies, including the Vice-Rector and the Vice-Deans for Student Affairs. Students have thus actively co-shaped the University and contributed to its current position in Slovenia and abroad, to its internationalisation and to its broader social development.

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1 The Importance of Student Representation at the University of Maribor

Students are an integral part of the university community, as a university cannot exist without them. They participate in activities that contribute to the success of the university. Their knowledge and later career achievements would not be possible without the university providing a quality support environment for the development of knowledge, additional skills, and career opportunities. Students are the largest stakeholder group in higher education and, at the same time, those who have the opportunity to co-create the environment in which they acquire knowledge, skills, and competences for the future.

At the University of Maribor, the number of students has increased over the decades, proving that the university remains an attractive choice for young people from Slovenia and the wider region. From its inception and throughout its development, the number of students has grown, and today, according to the Department for Education and Study, more than 15,000 students are enrolled. The faculties offer students a wide range of study programmes and extracurricular activities. Over the years, the University of Maribor has become one of the key pillars of Slovenian higher education and continues to hold this position today. It has followed development trends in higher education and adapted to the needs of the economy and society. It has also played an important role in co-deciding on higher education in Slovenia, actively participating in discussions on reforms, legislative changes, and the development of the academic environment. In addition, it has been continuously integrated into the international academic environment. The internationalization of higher education has become one of the key goals of modern universities, and the University of Maribor has successfully followed European and global trends in higher education. There is a noticeable increase in the number of international students, the development of joint study programmes with other universities, and strengthened cooperation in research, educational, and other projects at national and international levels.

Students study within study programmes, but university life is not limited to the pedagogical process in classrooms and taking exams. Extracurricular activities are crucial for students, as they are an important part of growth, development, and shaping a comprehensive academic experience. They enable students to develop so-called soft skills (communication, teamwork, organization, and leadership), connect

with students from other universities and countries (broadening horizons and networks), gain practical experience (helpful for career development), participate in sports, cultural, and social activities (contributing to physical and mental health), and engage in student representation (where they can actively influence the development of the university and the position of students within and beyond the university).

Currently, extracurricular activities at the university are mainly provided by student councils of the faculties, which are important bodies representing student interests and ensuring the development of quality student life at the university. They also play an important role in co-deciding on key issues at faculties and the university, as they participate in adopting regulations, study programmes, and other documents.

Extracurricular activities have played an important role at the university since its very beginning, as students organized cultural events, student media, sports activities, and various initiatives enriching student life even before the official establishment of the University of Maribor (Bračič, 1984).

Students demonstrated efforts to improve their position even before the university was founded, actively participating in discussions on the development of higher education in Slovenia during the time of the Socialist Federal Republic of Yugoslavia and in the development of Maribor (Bračič, 1975). Today, this tradition continues, as through student councils and other organizations, students actively represent their views and advocate for quality education, improved student standards, and conditions for successful academic and extracurricular engagement.

Student representation has proven to be an important force in shaping the university community throughout the development of the University of Maribor, as students have been involved in co-decision-making from the very beginning. This gives them an important position, as they serve as vice-deans and vice-rector, forming part of the leadership of the university and faculties and being directly involved in decision-making at the highest levels. Furthermore, the Statute of the University of Maribor (Univerza v Mariboru, 2025) currently stipulates that students hold one-fifth of the seats in every governing body, both at the faculty and university level. Students have a Vice-Rector for Student Affairs, who is part of the university leadership and represents the rights and interests of students. By function, the Vice-Rector for Student Affairs and the Vice-Deans for Student Affairs also serve as presidents of the Student Council of the university and its faculties. In the Student Dormitories

of the University of Maribor, students have their own representative body – the Student Council of Dormitory Residents. Thus, students are appropriately represented at all levels and can advocate for improving their position and developing extracurricular activities. Faculty Student Councils are composed of two representatives (members) from each year, elected for one year in transparent elections held by November 14 for the current academic year. Each year can elect five student representatives, with the two receiving the highest number of votes gaining voting rights in the faculty's Student Council, while the others form the advisory group of the council. All five representatives for a given year constitute the Student Council of that year. In Student Dormitories, the Student Council consists of one representative from each dormitory, also elected during faculty council elections. The Student Council of the University of Maribor is composed of members and their deputies, with each faculty having one member and one deputy, elected for a two-year term. Candidates are elected at meetings of the faculty Student Councils. Students also have representatives in all university and faculty committees and governing bodies, including management boards. At faculties, the Vice-Dean for Student Affairs is part of the faculty's management board, while at the university level, students have a representative on the University of Maribor Management Board.

Extracurricular activities are funded from various sources, most of which are received by Student Councils at faculties and coordinated by the University Student Council. Each year, the council receives funds for co-financing student interest activities, contributions paid by students upon enrolment (student interest activity fee), and funds from the Ministry of Higher Education, Science and Innovation intended for developing extracurricular activities. These funds finance the operation of faculty Student Councils, which submit their annual project work plans (content and financial evaluation) in response to the Call for Co-financing and receive funds for their activities, which they later report on. Remaining funds are used for university-level Student Council projects organized for all students and some student representatives (e.g., training and networking activities). Part of the funds is also allocated for compensation for work performed by student representatives (presidents of faculty and university councils and students actively assisting with major projects) and for covering professional support for student representation provided by the Student Affairs Office at the university. Without adequate funding, the functioning of student representation would not be possible, as project

implementation costs are rising, and the workload of student representatives in top positions increases each year as the university expands and develops.

Below, we provide information on the development of student representation and extracurricular activities organized by Student Councils, as these have significantly influenced the development of the University of Maribor and the inclusion of students in decision-making processes.¹

2 Development of Student Representation at the University of Maribor

2.1 The Period up to 1993

Student representation at the University of Maribor gradually evolved from informal initiatives into structured organizations during the first decades of the university's existence, gaining an increasingly important role in the academic and broader social environment.

Already in the 1960s, student representation began to develop, and in 1959 the student organization Association of Students of Maribor Junior Colleges was established (later transformed into ŠOUM), which addressed student issues through its committees (Kšela et al., 2024). At that time, freshmen events were organized, the student newspaper *Katedra* was published, and the Cultural and Artistic Society Študent began its activities. The Student and Pupil Cooperative was also opened, as well as the first self-service restaurant Center, and the first two student dormitories (Dorm I and II) in the Tyrševa residential area. The first freshmen event, organized by students of the Junior Technical College, took place on October 30, 1960. In 1964, the duration of studies at Maribor's junior colleges was approximately three years and one month, rising to three years and seven months by 1969. During this period, students faced low progression rates between years and unsatisfactory academic performance, often withdrawing from exams or passing with the lowest positive grades (Darin, 1979).

¹ In preparing this chapter, we relied on sources available in the digital and physical archives of the University of Maribor, the University of Maribor Library, and the Regional Archive Maribor. Despite a thorough review of sources, we acknowledge the possibility that some projects, events, or important information were not included, as they were not preserved in archives and therefore inaccessible. We have aimed to present as comprehensively as possible the development of student representation at the University of Maribor and the key milestones that have shaped its role in the academic space.

From the establishment of the University of Maribor in 1975, students actively participated in decision-making regarding the study process, teaching quality, student standard, and other important issues affecting their lives and work.

Student representation operated within the broader context of higher education reforms and social changes marking the transition from the socialist system to independent Slovenia. Key developments included the formalization of student councils, the establishment of the Student Organization of the University of Maribor (ŠOUM) (Kšela et al., 2024), and improvements in student living standards, largely due to the efforts of student representatives.

The University of Maribor was officially proclaimed on September 19, 1975, merging several higher education institutions already operating in the city. Among the university's key goals were the development of higher education adapted to economic needs and strong emphasis on cooperation between teachers and students as equal participants in the teaching-research process (Bračič, 1984).

When the agreement on the merger was signed, each faculty had a student co-signatory, symbolically highlighting the greater role of students in the new university. The decision to establish the university was confirmed at the University Council session on February 27, 1976, when Vladimir Bračič was appointed Rector (Bračič, 1984). Two Vice-Rectors were also appointed: Rudi Crnkovič from the ranks of teachers and Miroslav Rebernik as the student representative (Vice-Rector for Students). This made the University of Maribor the first university in Yugoslavia to appoint a student as Vice-Rector (Rebernik, n.d.).

In the first decade of the university's existence, significant changes occurred, also affecting students and their organization. The main goals were (Toplak, 2000):

- transformation of higher schools into faculties,
- development of postgraduate studies,
- establishment of international connections,
- improvement of student living standards and
- construction of student dormitories.

One major success of student organizing was the construction of new dormitories and a shared facility on Gosposvetska cesta (today known as ŠTUK). Plans also included the construction of student clinics and premises for additional activities, though these plans were not fully realized.

In the 1980s, student representation was closely connected within and beyond the university in the local environment. Student representatives at the University of Maribor were mainly linked through the University Conference of the Socialist Youth Alliance of Slovenia (*Sl. Univerzitetna konference Zveze socialistične mladine Slovenije*, UK ZMS), considered a precursor to today's Student Organization of Slovenia. Other student initiatives emerged during this period, critically addressing existing organizations and advocating for greater fairness in higher education. Important voices of the student movement included Radio Študent, Tribuna (in Ljubljana), and Katedra (in Maribor) (Toplak, 2000).

After the dissolution of UK ZSMS, the Student Organization of the University of Maribor (ŠOUM) was officially established in 1992, introducing its own representative body – the Student Parliament. Mechanisms for financing extracurricular activities were also created, implemented through the student committee (the predecessor of today's Committee for Student Interest Activities – KIDŠ) (Toplak, 2000).

In addition to formalizing student organizations, key social support mechanisms for students were introduced during this period (Toplak, 2000):

- scholarships from joint funds replaced state and foundation scholarships (e.g., France Munda and Žiga Zojs scholarships); in 1993, 55% of students received scholarships;
- at students' proposal, the state budget included a meal subsidy in the form of vouchers – the beginning of today's subsidized student meal system.

In 1993, the Higher Education Act came into force, bringing significant changes to university and student representation:

- UM received legal entity status, and faculties had newly regulated areas for implementing study programmes;

- for the first time at the national level, student councils of faculties and universities were legally recognized as the highest representative bodies of students at their respective institutions (“Zakon o visokem šolstvu (ZViS)”, 1993).

The Student Council of the University of Maribor gained the following powers (Toplak, 2000):

- providing opinions on the university statute and its amendments;
- deciding on general acts, study programmes, and proposals concerning student rights and obligations;
- appointing student representatives to working bodies of university bodies;
- participating in the university’s self-evaluation process;
- allocating funds for student interest activities.

Alongside official representation, students organized numerous extracurricular activities in the early years of the university (Toplak, 2000):

- In 1964, the Cultural and Artistic Society Študent (KUD Študent) was founded to promote cultural activities.
- In the 1970s and 1980s, students regularly organized university sports leagues and revived the rowing regatta on the Drava River.
- In 1990, Maribor Radio Študent (MARŠ) and Academic Publishing House Katedra were established.
- The academic choir gained its own space (APEZEUM), and cultural activities developed through various student initiatives.

Student newspapers such as *Spekter*, *Organon*, *Agronom*, and *Varia*, as well as newsletters like *ŠOK* and *Štil*, were published. Students also contributed to programmes on Radio Maribor, laying the foundation for the later independent student radio MARŠ (Darin, 1979).

The development of student representation at the University of Maribor up to 1993 was highly dynamic and reflected broader social changes in Slovenia and higher education. During this time, the foundations of modern student organization were laid, with strong emphasis on student rights, involvement in decision-making processes, and improvement of student living standards.

In 1993, student councils and ŠOUM officially assumed the role of key representative bodies of students at the University of Maribor, marking the end of the first era of organized student activity and the beginning of a new phase of student representation in independent Slovenia.

2.2 The Period between 1993 and 2004

During this period, several innovations were introduced in the field of student representation, such as the Regulation on the Provision of Funds and Implementation of the Student Interest Activities Programme (adopted on February 24, 2000), which defined the system of financing and organizing these activities. Funds were provided from various sources and were intended to support projects in culture, sports, science, and voluntary activities. Special emphasis was placed on encouraging students to participate in research and development initiatives that strengthened their innovative potential and contributed to the progress of the university (Univerza v Mariboru, Študentski svet, 2000a, 2000b).

In 2000, student interest activities focused on improving conditions for student organization, strengthening cooperation between students and faculties, and connecting with the local environment (Čuš, 2006). Great importance was also attached to the development of sports activities and artistic initiatives, which contributed to the greater visibility of the University of Maribor both in Slovenia and internationally.

By participating in student activities, students gained valuable experiences that went beyond formal education. Active involvement in projects and organizations enabled them to develop organizational and leadership skills and strengthen social networks, which improved their employability after graduation. The University of Maribor was already establishing itself as a dynamic academic centre that, in addition to quality education, offered broad opportunities for personal and professional development of its students.

For decades, the University of Maribor has advocated for the active involvement of students in decision-making processes, with student councils playing a central role. Their organization and functioning were regulated in detail by the Regulation on the Composition and Functioning of Student Councils, adopted on January 18, 2000 (Univerza v Mariboru, 2000).

This regulation provided a formal framework for participation and shaping the student community. The regulation defined a hierarchical structure of student representation. At the lowest level were year councils, addressing specific needs of individual years and study programmes. Next was the faculty student council, bringing together representatives of different years and programmes within a faculty or college. At the top was the University Student Council, acting as the central body representing the interests of all students and participating in shaping university policy.

The regulation also detailed student council election procedures, which ensured the legitimacy of these bodies by stating:

- Elections are direct, secret, and based on equal voting rights for all students; any student with active status can run and vote.
- The election process is divided into several stages, supervised by election committee; each faculty has a local committee, while the university has a central committee responsible for legality, candidate verification, and publication of results; committees also act as appeal bodies, ensuring transparency.
- An important task of student councils is the participation in the university's self-evaluation process; through this, students actively contribute to improving the quality of study programmes and the learning environment; their opinions and proposals serve as valuable feedback for university bodies, fostering dynamic development of the academic community (Univerza v Mariboru, 2000).

Faculty Student Councils and the University of Maribor Student Council represent the backbone of student participation and democratic decision-making within the university. The Regulation laid solid foundations for the functioning of student councils as we know them today.

At the same time, students gained representatives in academic bodies through amendments to the Statute of the University of Maribor and the Higher Education Act (adopted in 1993) (Univerza v Mariboru, 1995; "ZViS", 1993). The University Student Council positively assessed the work of the Vice-Rector and Vice-Deans but pointed out legal limitations affecting their functioning. Obstacles included resistance to changes in the university statute, blocking the establishment of new faculties, delaying international cooperation processes, supporting long-term students, and discrediting student representatives. The University of Maribor

Student Council therefore demanded that representatives of university student councils, not only the Student Organization of Slovenia, be appointed to the Council of the Government of the Republic of Slovenia for Student Affairs (Emeršič, 2001). This marked the first formal inclusion of the highest student representatives of the University of Maribor in national bodies dealing with student and higher education issues.

During this period, the Declaration on Rights and Access to Education in the Republic of Slovenia was also being drafted (Univerza v Mariboru, Študentski svet, 2001). Based on Article 57 of the Constitution of the Republic of Slovenia (“Ustava Republike Slovenije”, 1991), which guarantees the right to education, the principles of a social state, and youth political organizations, student and pupil organizations as well as student councils demanded:

- the abolition of tuition fees and other financial contributions by students,
- facilitating construction of student dormitories,
- higher social support for students and pupils,
- preservation of the student work system,
- tax relief for student and pupil income,
- decentralization of higher education,
- improvement of the quality of higher education,
- prevention of addressing budget deficits at the expense of students.

In the academic year 2000/2001, the University of Maribor adopted amendments to the Regulation on the Provision and Implementation of the Student Interest Activities Programme (Univerza v Mariboru, Študentski svet, 2000a). These changes represented an important step toward greater transparency, efficiency, and organization in financing and implementing extracurricular activities, which are essential for student life.

The amendments more precisely defined the responsibilities of the University Student Council and faculty student councils in organizing and managing interest activities. The University Student Council was granted a clearly defined right to implement interest activities within the framework of the regulation, university acts, and legislation, with funds obtained from these activities allocated exclusively for financing new projects. This strengthened student autonomy in designing and implementing activities that enrich their study experience.

An important element of the changes was a fairer distribution of funds among student councils. The previous provision that allocated funds in fixed percentages was abolished, allowing greater flexibility in allocating financial resources according to the needs of individual projects. At the same time, a mechanism for reallocating unused funds was introduced, ensuring better utilization of financial resources.

The financing system was supplemented with stricter control, as changes were introduced in the reporting process on fund usage. The amendments required project implementers to submit detailed content and financial reports, ensuring greater transparency in fund management.

The amendments expanded the range of activities that student councils and student organizations could organize, including:

- publishing activities, including issuing publications and advertising,
- organization of educational seminars and professional excursions,
- cultural and entertainment events,
- sports and recreational activities.

More precise conditions for calls and project selection were also established, with priority given to projects implemented across multiple university members (interfaculty cooperation). This strengthened collaboration between faculties and enabled the implementation of larger, university-oriented projects.

Changes were also introduced in the functioning of the Committee for Student Interest Activities, which gained expanded powers in overseeing project activities. The Committee was responsible for:

- reviewing and selecting projects in public calls,
- preparing the development programme for student interest activities,
- monitoring the use of funds and equipment intended for projects,
- communicating with the public about activity implementation.

A supervisory committee was also established, overseeing project implementation and financial flows, with members from the Student Council, the University Management Board, and rectorate professional services.

This document established more transparent financial practices, strengthened the autonomy of student councils, and increased opportunities for developing diverse extracurricular activities.

A proposal for organizing sports at the University of Maribor was also presented. Sports activities were accessible to all students and staff and were mandatory for first-year students. Programmes included basic and advanced levels and were implemented by the Chair of University Sports at the University of Maribor. First-year students participated free of charge, funded by the Ministry of Education, Science, and Sport (Univerza v Mariboru, Študentski svet, 2000b).

The Sports Committee at the University of Maribor consisted of the Vice-Rector for Education, the head of the sports office, representatives of the University Student Council, the Chair of Sports, ŠOUM, and sports associations. Their tasks were supervision and organization of sports activities.

The proposed solutions ensured a systematic arrangement of sports education and the inclusion of all students and staff in sports activities.

Various opportunities for student projects at the University of Maribor were available during this period. These projects included the development of a study database, a student newspaper, and the creation of websites for university student councils (Razpis študentskih projektov, 2000).

The study database aimed to provide students with continuous access to academic resources from all faculties under the university, enabling the transfer of study materials. The project aimed to have at least 700 resources available by the end of 2001 and offer students a platform for contributing materials. It was anticipated that the database would be accessible online, promoting the university's academic achievements and enabling advertising.²

The student newspaper project aimed to encourage the creation of faculty-specific newspapers, enabling students to report on university activities and important events. The goal was to increase student engagement and promote university life while offering students opportunities to develop critical thinking and journalistic skills.

² No precise data on the success of such a database were found.

The student council website project involved creating online platforms providing detailed information on council operations and financing. Websites would allow students to submit opinions and suggestions, contributing to greater transparency and communication within the university.

Between 1995 and 2004, issues related to subsidized student meals in Slovenia were addressed. Student meal vouchers were introduced as a system of financial support to ensure access to a hot meal at a subsidized price. Despite good intentions, the system faced numerous challenges and changes over the years, often causing dissatisfaction among students. One major problem was the subsidy amount, which did not always keep pace with actual food price increases. This meant students still had to cover a significant portion of meal costs, posing a financial burden for many. There were also accessibility issues – some food providers restricted voucher use, or the selection of subsidized meals was limited and of poor quality.

In Maribor, students repeatedly advocated for system improvements. Although there were no major protests between 1995 and 2004, student organizations actively lobbied for better conditions. ŠOUM, through various initiatives, sought higher subsidies, better meal options, and broader voucher accessibility. Many activities were coordinated between ŠOUM and the University of Maribor Student Council from the beginning, as they addressed the same student issues.

On June 19, 2001, the University of Maribor Senate discussed the issue of subsidized student meals at its 9th session. The Vice-Rector for Student Affairs presented the current regulation, which stipulated that subsidies were available only from September to June. The University of Maribor Student Council expressed the view that student activities take place throughout the year and that subsidized meals should also be available during the summer months. The Senate of the University of Maribor then unanimously adopted Resolution 50, expressing support for student demands and calling for the provision of subsidized student meals throughout the entire year. The resolution reflected the efforts of the Maribor academic community to improve the social conditions of students.

Efforts to create a better system of subsidized meals remain a constant task for student representatives. Their goal is to ensure that every student has access to quality and affordable meals, regardless of socio-economic background.

2.3 The Period between 2005 and 2014

In 2005, one of the longest-running projects of the University of Maribor Student Council began, celebrating its 20th anniversary in 2025. We mark twenty years of one of the most important humanitarian initiatives – field blood donation campaigns organized by the University of Maribor Student Council. These campaigns were first carried out in 2005 at the initiative of the Student Council and with the support of the university leadership, becoming an indispensable part of student life. Since then, the campaigns have been organized twice a year, in spring and autumn, enabling students and university staff to donate blood and thus contribute to saving lives. Over two decades, nearly 5,000 students have participated in these campaigns, demonstrating that solidarity, helping others, and social responsibility have become core values of the University of Maribor Student Council. The blood donation campaigns of the University of Maribor Student Council are not merely medical events but also serve as platforms for raising awareness about the importance of blood donation. They are accompanied by numerous informational campaigns and motivational messages encouraging students to take an active social role. Thanks to this long-standing tradition, the campaigns have gained exceptional support among students, university staff, and the wider public.

In addition to humanitarian activities, between 2005 and 2014, the University of Maribor Student Council represented a strong voice for students in the academic environment. In 2005, the role of student councils at faculties and universities was formalized, allowing students greater participation in decision-making on academic matters. During this period, the University of Maribor Student Council became a key partner in improving study programmes, revising curricula, and enhancing the quality of the educational process (Bertoncelj et al., 2015). The University of Maribor Student Council also supported the tutoring system, which became an important support mechanism for new students. In 2010, at the initiative of students, a campaign for changes in the organization of exam periods was launched, leading to a more flexible system for fulfilling academic obligations. Amendments to the examination regulations were discussed and adopted, representing a significant improvement in the study process. In 2009, the University of Maribor Student Council appointed its first public relations representative, as recorded in the minutes of the 9th regular session of the University Student Council on February 10, 2009.

Alongside academic initiatives, the Student Council organized numerous social events that enriched student life in Maribor. Among the most recognizable was the event “Gremo na prvi rok”, which, at the start of the academic year, helped connect students and introduce them to extracurricular activities and opportunities at the university. Student councils have played and continue to play an important role in this, actively co-creating and preparing numerous extracurricular activities in addition to representing student rights. Various cultural events and sports activities were also organized, further enriching the student experience in Maribor (Bertoncelj et al., 2015).

The period 2005–2014 was also significant due to the expansion of the University of Maribor, which led to an enlarged composition of the University Student Council following the inclusion of new members. During this time, representatives from the Faculty of Natural Sciences and Mathematics, Faculty of Arts, Faculty of Energy Technology, and Faculty of Tourism joined the University of Maribor Student Council (Bertoncelj et al., 2015).

In addition to organizing events and humanitarian campaigns, the University Student Council also ensured student representation at the national level. It collaborated with other university student councils, national student organizations, and various government institutions, advocating for student interests in areas such as higher education funding, improving study conditions, and managing student dormitories. The University of Maribor Student Council also led initiatives for greater student involvement in decision-making processes regarding university reforms and improvements in education quality.

The period 2005–2014 was a time of intensive development and consolidation of the Student Council’s role within the academic community. Through their organization, students achieved significant changes, improved study conditions, and strengthened their connection with university leadership. Their active participation demonstrated that students, through engagement and dedication, can influence the quality of their education and contribute to shaping a better university community (Bertoncelj et al., 2015).

Over a decade of activity, the University of Maribor Student Council proved that students can be a major driver of change and, through joint efforts, create better conditions for future generations. Through numerous initiatives, from academic

improvements to socially responsible projects, the University of Maribor Student Council established itself as an indispensable part of university life, continuing to play an important role in representing student interests today.

2.4 The Period between 2015 and 2025

Student representation at the University of Maribor entered the period between 2015 and 2025 well-prepared. The efforts of previous generations of student representatives for student rights enabled students to dedicate more of their time and energy to expanding extracurricular activities and improving their own functioning.

Based on Article 195 of the Statute of the University of Maribor (Univerza v Mariboru, 2023), student representatives are actively involved in habilitation (academic promotion) procedures by providing opinions on pedagogical competence. The faculty student council is invited to submit its opinion by the University's Habilitation Office. Since meaningful discussion among students – who are the only ones able to assess a candidate's pedagogical competence firsthand – is essential for a well-founded opinion, efforts were made to conduct these discussions thoroughly. Thus, at the July 2016 meeting of the Vice-Deans' Collegium, it was agreed that opinions on pedagogical competence could only be given at an extraordinary or regular session. Students were well aware of the importance of the student survey, which forms the basis for providing opinions on pedagogical competence. They regularly raised awareness about the survey through various promotional activities and materials distributed among students. The University Student Council and the Collegium of Vice-Deans for Student Affairs cooperate with the Working Group for Preparing and Monitoring the Student Survey, where student representatives can express concerns or suggestions related to the survey. The digitalization of society also brought changes to the range of options and services available to students. Every student receives a digital identity (DI), granting access to services such as email, the Eduroam wireless network, the Academic Information Subsystem (AIPS), the Moodle UM learning environment, Microsoft Office 365, the Digital Library of the University of Maribor (DKUM), portals like Gartner and Statista, etc. Additionally, students can use licensed software for free, such as the statistical analysis programme SPSS, Foxit PDF Editor Pro, the Amebis Besana proofreading tool, and others. These digital services provide students with better study conditions. The "Amendments to the Regulation on the Functioning

and Composition of Student Councils” (Spremembe in dopolnitve Pravidnika o delovanju in sestavi študentskih svetov, 2022) require that invitations and minutes of faculty student council sessions and the University of Maribor Student Council sessions be publicly posted on websites. Compliance with this requirement was repeatedly checked during this period, ensuring adherence to rules and transparency in the functioning of student councils.

Students also demonstrated their engagement by participating in decision-making bodies at the national level, such as the Council of the Government of the Republic of Slovenia for Student Affairs, where the University of Maribor has its own student representative. Presidents of university student councils also attended sessions of the Rectors’ Conference of the Republic of Slovenia, where they could express opinions on pressing student issues and participate in shaping legislation.

Students at the University of Maribor are deeply involved in extracurricular activities. Among the largest and most prominent projects is the University Sports League for the Champion of the University of Maribor, held every academic year and culminating in April with the final tournament. The league offers students a healthy way to spend their free time while competing in good sportsmanship with their peers. The league includes four competitions: men’s football, men’s basketball, men’s volleyball, and women’s volleyball. Students can cheer for their faculty teams, thanks to student representatives who actively promote the matches. To keep the league engaging, improvements are made every year. In 2023, the Most Valuable Player (MVP) award was introduced for the best player of the final tournament. In 2024, alongside court matches, a fan competition was held, where supporters competed for the title of best cheering group. Student teams also have the opportunity to participate in the international Euroijada competition, further enhancing the reputation and prestige of the University of Maribor.

The blood donation campaigns organized by the University of Maribor Student Council, which began in 2005, celebrated their 20th anniversary in 2025, becoming one of the council’s longest-standing projects. After the challenging period between 2020 and 2022, the campaigns experienced a revival, as reflected in the annual student participation numbers. According to the Slovenian Red Cross – Maribor Regional Association, 59 students participated in 2022, 217 in 2023, and as many as 288 in 2024.

In 2023, the University of Maribor Student Council introduced the idea of organizing a sports competition among Slovenian universities. Thus, in November of the same year, the first Inter-University Sports Competition took place, where representatives of several Slovenian universities competed in football, basketball, and volleyball.

Faculty student councils also contribute to the development of extracurricular activities by organizing numerous projects each year. These projects include educational, humanitarian, sports, entertainment, and promotional activities, as well as participation in various excursions and conferences at home and abroad.

Student representatives faced an unprecedented challenge in 2020. The COVID-19 pandemic initially placed student council operations in an uncertain state, and soon all activities were completely halted. Most projects resumed in-person implementation in 2022. In October 2020, faculty student council elections were held digitally for the first time. Based on the Decision on Calling Elections for Faculty Student Councils and Other University Members, issued on October 7, 2020, elections were conducted via Microsoft Teams. Just over a year later, in November 2021, elections were held using the Simply Voting tool. Student representative elections saw another innovation in 2023 when the University Election Committee decided that candidate self-promotion would be allowed under conditions specified in the Decision on Conducting the Election Campaign and Election Rules for Student Council Elections.

In 2023, the importance of training for student representatives was emphasized again. The University of Maribor Student Council began organizing training sessions for student representatives, where students acquired the necessary knowledge to perform their representative roles. They were educated on university operations, student council functioning, habilitation procedures, and the importance of providing opinions on pedagogical competence, along with practical advice and discussions of everyday issues. Vice-Deans for Student Affairs received training at thematic collegium meetings, where experts introduced topics such as the green transition, habilitation, and personal data protection.

In the academic year 2024/2025, the institutional tutoring system was launched at the University of Maribor, aimed at ensuring favourable conditions for the active involvement of all students in university life and to assist in resolving their general

and specific academic challenges from enrolment to graduation. Student representatives actively participated in preparing the Guidelines for Implementing the Tutoring System at the University of Maribor (Univerza v Mariboru, 2023).

3 The Future of Student Representation at the University of Maribor

For five decades, the University of Maribor has shaped an academic and social community in which students are its key co-creators. Their voice is heard and represented at all levels of university governance, thanks in large part to student representation. Looking ahead, its role will remain crucial in ensuring a high-quality academic and extracurricular environment.

3.1 Development of Extracurricular Activities

In addition to academic development, the university must continue to promote extracurricular activities. Despite past successes in this area, students are expected to face certain challenges in the future. One of the major challenges will be securing sufficient financial resources for the operation of student councils, which organize various extracurricular activities for students. Organizing quality events, workshops, and projects requires funding, which is often limited.

Cultural, sports, entertainment, and educational projects enrich the student experience and foster a strong sense of community. Through their projects, student councils aim to help students acquire competences and knowledge, foster innovation, and build networks, further strengthening their readiness for the labour market. Collaboration with the local community and industry can bring numerous opportunities for students. Increasing opportunities for internships and participation in real-world projects will enable students to gain experience and ease the transition from academia to a professional career.

Costs are constantly rising, so new ways of ensuring stable funding will need to be found. In the future, closer cooperation with the university and external partners will be essential to ensure the long-term sustainability and development of student council activities.

Faculty student councils are funded by the University of Maribor Student Council based on an annual call for proposals, enabling them to successfully organize various events for students. In line with its strategy and goals, the University of Maribor will

continue to recognize the importance of strong student representation and provide appropriate support.

3.2 Comprehensive Student Support

In addition to financing student council activities, it is also necessary to continue caring for students' well-being, both socially and psychologically. Students are the heart of the university, but at the same time, they are one of the most vulnerable groups. Many face financial challenges, heavy academic workloads, and mental health issues. Student work, which enables many to make ends meet, can negatively affect academic success when workloads become excessive. Therefore, it will be important for the university and the wider community to continue providing support – through new high-quality study programmes and training (the role of the university and its faculties), additional scholarships (the role of the state and local communities), more accessible physical and mental health services (the role of healthcare institutions), and greater opportunities for balancing study and work (where the university can play a significant role).

3.3 Cooperation in Co-Governance of the University and Its Faculties

Collaboration between student representatives and university leadership ensures that the needs and interests of students are considered when making important decisions, both at the university and faculty levels. Students actively participate in events, round tables, and discussions, contributing to their personal and academic growth. Connecting student councils and students from different faculties is essential, as cooperation between vice-deans for student affairs and faculty student councils creates a positive dynamic where knowledge, experiences, and best practices are exchanged. Collaboration among representatives of Slovenian universities has also been strengthened, enabling better advocacy for student rights at the national level. Such cooperation between universities will continue to promote greater student mobility and the exchange of ideas, directly contributing to a richer study experience. In addition, student representation plays a key role in providing additional opportunities for students' personal and professional development. Organizing workshops, educational events, and social gatherings allows students to develop competences that will benefit them even after graduation.

Students participate in various committees, university bodies, faculty student councils, and in evaluation and accreditation processes, both national and international, significantly contributing to the quality of university operations and faculty study programmes. In recent years, a decline in student interest in more active roles in committees and governing bodies at faculties and the university has been observed. It is necessary to find appropriate ways to increase student engagement and encourage the development of responsibility among students.

This indicates that students have a very responsible role and that the university recognizes them as important stakeholders in decision-making and co-governance. It is important to understand that efforts to improve student living standards never end. Student representatives at the University of Maribor must engage in discussions both within and outside the university to strengthen students' position. At the national level (Council of the Government of the Republic of Slovenia for Student Affairs), they advocate for more accessible and better living conditions for students, flexible meal subsidies, favourable scholarship conditions, equality of student status, and other measures that could ease students' lives during their studies. All these changes can help students focus more easily on their academic and personal growth and, consequently, contribute to the development and reputation of the University of Maribor.

Maintaining and ensuring quality communication between the university and its students will remain crucial. It is important that students are clearly and promptly informed about their rights and obligations, as this contributes to a better understanding of university operations and enables better cooperation among all stakeholders. Digitalization and modern communication channels offer numerous opportunities to improve information accessibility and strengthen the connectedness of the entire student community.

For effective functioning of student representation, it will be necessary to continue promoting cooperation among faculties and strengthening ties between vice-deans for student affairs. Greater connectedness enables faster problem-solving and better organization of joint projects. It is also important to strengthen cooperation with student representatives from other universities, both in Slovenia and internationally. The exchange of best practices and joint advocacy for student rights are key to improving student living standards.

Digitalization and technological progress offer new opportunities to improve teaching methods and access to knowledge. Student representatives will play an important role in promoting innovative learning approaches and adapting the university environment to modern challenges.

4 Concluding Thoughts on the Role of Students upon the 50th Anniversary of the University of Maribor

On the occasion of the 50th anniversary of the University of Maribor, we can proudly state that the voice of students is heard and well represented. Student representation has, over the years, become a pillar of university governance, ensuring that the needs and interests of students are properly considered. Slovenia can also boast an exceptional system of student representation, which demonstrates excellent results, as students are actively involved in the management of the university and its faculties. The future brings challenges but also opportunities for further development, making it essential to continue encouraging the active involvement of all members of the community – professors, researchers, and students. Only through joint efforts can we create an environment where students not only receive education but also develop as responsible individuals prepared for the challenges of the future.

Student representation, with its role in the development of the university, remains crucial, not only representing student interests but also actively contributing to the creation of innovative and sustainable solutions for the challenges posed by a rapidly changing world. In doing so, we will create a university space where students have the opportunity for unlimited personal and academic development while actively shaping the society in which they will live and work. In the future, it will be even more important to maintain a creative and constructive dialogue that ensures the continued growth of the University of Maribor, not only as an educational institution but also as a space of progress, solidarity, and innovation. At the same time, we must not forget that successful development of the University of Maribor will also depend on adaptability to changes in the educational environment and the continuous search for new ways to integrate technology and innovation into the educational process. The university must remain open to new ideas and approaches that will provide students with access to the latest knowledge, research, and technologies. Only in this way will students be guaranteed a competitive advantage in the global labour market and the opportunity to develop into creative and skilled individuals ready to respond to future challenges. In this process, the cooperation of all members of the university

community will be particularly important, as only through joint efforts can long-term success and sustainable development be achieved.

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INTERNATIONALIZATION OF THE UNIVERSITY OF MARIBOR – SOME EXAMPLES OF ACADEMIC COOPERATION IN THE INTERNATIONAL ENVIRONMENT

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The chapter on internationalization at the University of Maribor examines key strategies and achievements in the institution's international collaboration over the decades. It highlights the transition from the university's initial steps in the international academic sphere to the development of robust programmes such as Erasmus and CEEPUS, which have significantly enhanced student and staff mobility. The university places a strong emphasis on integrating international students and developing study programmes in foreign languages, thereby strengthening its global presence. Internationalization is fostered across all areas of the university's operations, contributing to its academic excellence. The internationalization strategy, which incorporates intercultural content into the curriculum and enhances digital mobility, enables the University of Maribor to remain competitive and relevant in the dynamic global higher education and research landscape.

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University of Maribor Press

1 Introduction

Internationalization of the University of Maribor represents one of the key elements in the university's development strategy (Univerza v Mariboru, 2021). This chapter outlines the broader contexts and dynamics of international collaborations that shape the university environment as a globally connected and interculturally rich hub of academic excellence. Aspects of the internationalization of research activities are addressed in a separate part of the monograph, as are the international components of educational and study programmes. Internationalization transcends individual areas and appears as a cross-cutting theme throughout all parts of this monograph, reflecting the fact that the University of Maribor, through various forms of international cooperation and openness strategies, contributes to shaping the global scientific and educational space.

2 The Concept of Internationalization at the University of Maribor

Internationalization of higher education has become an indispensable element of the modern university system, far beyond the mobility of students and professors. It represents a strategic approach to opening academic spaces to the global world. As the second-largest university in Slovenia, the University of Maribor has set specific goals in the field of internationalization, shaped in accordance with national guidelines on internationalization in higher education, its own needs, regional context, and global trends. Internationalization at the University of Maribor stems from its geographical and cultural position, which enables it to act as a bridge between the Central European and Southeast European academic spaces. In addition to regional partnerships, the university strengthens its global presence by establishing connections and partnerships with renowned universities and institutions worldwide and by integrating students from diverse cultural and academic backgrounds.

The development of the concept of internationalization at the University of Maribor is closely linked to the university's strategic documents, which have gradually defined its priorities and objectives. From its first participation in European mobility programmes in the 1990s to modern multidisciplinary projects with an international dimension, the University of Maribor has consistently strived to improve the quality of education and research through international cooperation. In the university's

strategy for the period 2021–2030, internationalization is recognized as a key tool for achieving global visibility and competitiveness (Univerza v Mariboru, 2021).

Internationalization of the university emphasizes both regional connections and global ambitions. Through the global impact of its research results, the inclusion of foreign students and researchers, and the development of globally relevant study programmes, the university aims to create a space that transcends national borders and enables creative engagement with global challenges. The University of Maribor thus strengthens its visibility, creates an environment where local needs and global trends intersect, and actively shapes Slovenia's role in the global academic space.

From an organizational perspective, major changes at the University of Maribor occurred with its accession to the European mobility programme Erasmus in 1999; at the rectorate, the Office for International and Inter-University Cooperation coordinated the work of Erasmus coordinators at the faculties. Over time, this office evolved into a department that centrally manages agreements and scholarships, while coordinators at the faculties handle academic aspects related to fulfilling study obligations for both University of Maribor students abroad and foreign students at the university.

3 Beginnings of International Cooperation (1975–1990)

Although publications of the University of Maribor about its development in the first decades contain little mention of internationalization, it is evident that there was always significant discussion, even in the publication marking the end of the first decade of the then Association of Higher Education Institutions in Maribor, about comparing the university with trends and developments in the world and the international space (Kerin, 1985). It is therefore not surprising that the University of Maribor was one of the first signatories of the Magna Charta Universitatum on September 18, 1988, marking its entry into the international family of universities committed to autonomy in research, education, and innovation. Similarly, the conclusion of cooperation agreements with foreign universities shifted from more regional frameworks of the former Yugoslavia and neighbouring countries such as Austria, Hungary, and Italy to agreements with universities in the USA and China (Toplak et al., 2000). In general, international cooperation took place at the level of faculties and even through individual contacts between researchers and higher education teachers.

4 Development of International Cooperation and Mobility (1991–2024)

After Slovenia's independence in 1991, internationalization was gradually incorporated into its higher education policies. However, before 2011, no specific national strategic document comprehensively addressed the internationalization of higher education. Nevertheless, during this period, important activities and reforms took place that promoted international cooperation and mobility in higher education.

One key milestone was Slovenia's inclusion in the Bologna Process, which began in 1999. The goal of this process was to establish a unified European Higher Education Area, requiring adjustments of the Slovenian higher education system to European standards and promoting international mobility of students and academic staff. Slovenia actively participated in this process, leading to reforms of study programmes and the introduction of the ECTS credit system.

In addition, since 1999 Slovenia has participated in various international programmes, such as the Erasmus programme, which enabled student and professor exchanges and thus contributed to the internationalization of education. During this period, Slovenian higher education institutions began to establish more intensive connections with international partners, leading to greater involvement in international research projects and networks. In more than 25 years of participation in this programme, the University of Maribor has been successfully involved in all phases. Today, participation in the programme requires obtaining the Erasmus Charter for Higher Education, which represents a quality benchmark and a common standard for managing student and staff mobility. From the initial 18 outgoing and 87 incoming mobilities, the University of Maribor has grown to more than 300 outgoing and over 1,000 incoming mobilities annually (Univerza v Mariboru, 2024). This cooperation is realized through approximately 700 agreements within the Erasmus+ programme. Erasmus+ integrates several former EU programmes, primarily TEMPUS, in which the University of Maribor participated before Slovenia's EU membership as a country preparing for accession, and after joining the EU in 2005 as a member state university helping universities in former Yugoslav countries and post-Soviet states align with the European Higher Education Area. Another programme where the University of Maribor was the most successful institution in Slovenia was Leonardo da Vinci, aimed at practical training in industry

as part of studies. Through projects such as EUROSILLS and GRADEX, the University of Maribor offered 20 internships annually, which was previously not possible. Today, student mobilities for practical training take place under Erasmus+ KA 130 and 171, as well as Erasmus+ Cooperation Partnerships in Higher Education (KA 2). From the perspective of internationalization of postgraduate studies at the University of Maribor, the Erasmus Mundus, a sub-programme of Erasmus+, is of particular importance. In this programme, the University of Maribor was a partner in the JoinEU SEE project series, which ran for five cycles and brought master's and doctoral students from Western Balkan countries to the University of Maribor. At the level of Central and Southeastern Europe, the CEEPUS programme (Central and Eastern European Programme for University Studies) is also important for the University of Maribor, enabling student and staff mobility.

The first comprehensive National Higher Education Programme, adopted in 2002 (“Nacionalni program visokega šolstva Republike Slovenije (NPVS)”, 2002), emphasized the need for Slovenian universities to integrate into international flows. The programme highlighted the importance of participation in European educational and research networks and encouraged student and professor mobility, aiming to increase the competitiveness of Slovenian higher education internationally.

The Resolution of 2007 (Resolution on the National Higher Education Programme of the Republic of Slovenia 2007–2010) (“Resolucija o nacionalnem programu visokega šolstva Republike Slovenije 2007–2010 (ReNPVS)”, 2007) upgraded the previous programme with more concrete measures for internationalization. It stressed the importance of integrating Slovenian higher education institutions into the European Higher Education Area, primarily through the Bologna Process. It encouraged the development of joint study programmes with international partners and an increase in the number of foreign students in Slovenia.

The national consultation on the internationalization of higher education, held in February 2011, highlighted the University of Maribor's key orientation toward developing international cooperation and visibility during this period (Petrović Jesenovac, 2011). Ivan Rozman, then Rector of the University of Maribor and Vice-President of the Slovenian Rectors' Conference, emphasized that internationalization of higher education is a necessity and an “essential component” of the modern university system. He pointed out shortcomings in the national higher

education programme for 2007–2010 and noted that the new programme for 2011–2020 was more clearly defined. Its goal was to increase Slovenia’s attractiveness as a destination for study and for pedagogical, research, and professional work by foreign students and experts. At that time, Rector Ivan Rozman also mentioned that the share of exchange students at the University of Maribor was around 1.5%, but the university aimed to reach 10%. He stressed the importance of active membership in international networks and efforts to draw EU funds, while warning about international competition from universities that are better funded and more attractive to foreign students. In conclusion, he highlighted as one of the university’s long-term goals a breakthrough into the top 500 universities in the world.

The Resolution of 2011 (“Resolucija o Nacionalnem programu visokega šolstva (ReNPVŠ11-20)”, 2011) further strengthened the commitment to internationalization. It emphasized the need to increase international mobility of students and staff and participation in international research projects.

The University of Maribor continued to strengthen internationalization as an important strategic orientation during this period. Projects such as Internationalization – A Pillar of Development of the University of Maribor, implemented between 2013 and 2015, highlighted the importance of cooperation with foreign partners, attracting international students, and integrating international content into the educational process. The project was presented to the public by then Rector Danijel Rebolj at an event in March 2014, where the university’s efforts to increase global visibility and inclusion in the international academic space were emphasized (Univerza v Mariboru: Internacionalizacija visokega šolstva, 2014). These initiatives contributed to further strengthening the university’s role in this area.

In 2018, the University of Maribor took a decisive step forward by developing course units for incoming students on international mobility and preparing English-language study programmes. During this period, a catalogue of more than 1,300 courses was established, which is still offered to international students today. These courses became the foundation for incoming student mobility, which reached a record number in the academic year 2023/2024, namely more than 1,300 incoming students (Univerza v Mariboru, 2024). Additionally, support was provided for the development of five study programmes taught in English. This significantly

contributed to the broader accessibility and attractiveness of the university in the international higher education space.

In 2021, the University of Maribor expanded internationalization through several key initiatives. It created an ecosystem that fosters connections between domestic and international students, enhances intercultural competences and language skills through informal activities and the University of Maribor Summer School – Summer University. At the same time, the university strengthened its international visibility by participating in global associations and promoting itself in the Western Balkans and Eastern Europe. Internationalization of research includes hosting international researchers and involving doctoral students in global projects. The university also improved mobility frameworks that facilitate participation in exchanges, thereby strengthening the global research network and student integration.

The latest resolution, adopted in 2022 (“Resolucija o nacionalnem programu visokega šolstva do 2030 (ReNPVŠ30)”, 2022), continues the directions of previous documents but with greater emphasis on digitalization and sustainable development. Internationalization remains a key objective, aimed at improving the quality of education and research and enhancing the international competitiveness of Slovenian higher education.

Following this resolution, in 2023, the Strategy for Internationalization of Higher Education and Science in the Republic of Slovenia until 2030 was formulated (Direktorat za visoko šolstvo, n.d.), with the goal of making Slovenian higher education an integral part of the global higher education space, continuously improving its quality through cooperation with leading foreign institutions. The resolution emphasizes the inseparable link between the higher education and research space, where internationalization encompasses both student mobility and research collaboration, strengthening Slovenia’s global competitiveness. The University of Maribor implements this through the European University Network ATHENA, while also following the guidelines of the European Union. The resolution also highlights sustainable mobility and digital forms of cooperation, such as virtual mobility, which enables access to internationalization without physical presence – a concept that became particularly relevant during the pandemic. The resolution promotes two-way mobility. The University of Maribor successfully

encourages outgoing mobility for students by actively promoting and implementing short-term mobilities (Blended Intensive Programmes – BIPs).

The year 2024 ended with anticipation of the adoption of the Higher Education Act in 2025, which, despite divided opinions, placed internationalization more prominently in focus. In an article in *Večer* (Žišt, 2024), the Rector of the University of Maribor, Zdravko Kačič, emphasized, in the light of the amendment of the draft of this Act, that internationalization is a key element in the development of higher education, as it enables competitiveness in the European educational space and greater inclusion of Slovenian universities in international integration processes. He pointed out that Slovenian universities should have started developing study programmes in foreign languages, especially English, more than a decade ago, but the lack of appropriate legal frameworks caused delays that negatively affected their development potential. In his view, the new law brings significant improvements, as it allows teaching in a foreign language while ensuring Slovenian students' right to study in Slovenian. Zdravko Kačič also highlighted the inconsistency of the previous system, which emphasized the protection of the Slovenian language only in spoken form, while study literature was often in foreign languages. According to him, this practice reflects an unfair interpretation of the constitutional right to study in one's mother tongue. The Rector believes that the new Act offers an opportunity for more intensive development of internationalization and alignment with European standards, which is crucial for strengthening the quality and reputation of Slovenian higher education in the international arena.

5 A Palette of Diversity: Internationalization at Faculties of Social Sciences and Humanities

5.1 The Perspective of the Faculty of Economics and Business

The Faculty of Economics and Business of the University of Maribor (EPF UM) views internationalization as a fundamental pillar of development and recognition in the global academic space. Today, the faculty has a clearly defined Internationalization Strategy for the period 2022–2030 (Ekonomsko poslovna fakulteta Univerze v Mariboru, 2023), which includes seven priority strategic goals for internationalization, designed to strengthen global engagement and international presence through defined development objectives, tactics for achieving them, and

key performance indicators. These strategic goals reflect the faculty's commitment to expanding global influence, promoting internationalization, and continuously improving the quality of education in economics and business studies, aligned with international standards, while fostering principles of sustainability and a culture of quality.

5.1.1 Internationalization and Excellence in Economics and Business Studies

International professional accreditations in economics and business studies are specific to education in this field, and without them, a modern business school cannot position itself on the map of excellence in business and economic education. In the area of international accreditations, which the faculty sees as a pathway to excellence, EPF UM has been a pioneer among social sciences faculties. The importance of international accreditations at EPF UM has been recognized since 1989, when the first activities began to introduce an international study programme and establish the International Postgraduate School of Management with the international study programme Business Management and Organization – MBA, which was launched in 1990 (Hauptman & Oplotnik, 2019). The significance of benchmarking against the best was acknowledged even then; the MBA study programme at EPF received its first international accreditation in 1996 from the European Council for Business Education (ECBE) and re-accreditation in 2003. Further recognition of the importance of international comparisons with leading business schools was confirmed by international accreditations in 2008 and 2009 (ECBE) and by the Accreditation Council for Business Schools and Programmes (ACBSP) for all EPF UM study programmes. In 2018, the faculty achieved its first AACSB accreditation – the most prestigious international accreditation in economics and business studies – and successfully renewed it in 2023. AACSB quality standards are met by only 6% of leading business schools worldwide, distinguished by excellence and innovation in teaching, research, and societal impact.

5.1.2 From the First Modest but Valuable International Experiences

The very first beginnings, the initial international experiences and exchanges, were modest – perhaps all the more valuable because of that. As early as 1964, the school closely cooperated with the College of Economics in Berlin, from 1967 with the

College of Social and Economic Sciences in Linz, and from 1968 with the Faculty of Economics in Trieste, the University of Graz, the Vienna University of Economics and Business, and the College of Economics in Prague. Close international cooperation with these institutions led to the first international symposium, the First Alpe-Adria Symposium, in 1971. The symposium was the result of successful collaboration primarily between the College in Linz, the Faculty of Economics in Trieste, and the then College of Economics and Commerce (Hauptman & Oplotnik, 2019).

The already mentioned international study programme Business Management and Organization – MBA, established in 1990, was included in Slovenia's first TEMPUS project in 1991. Within the TEMPUS project, in the academic year 1991/92, the Commission of the European Communities approved three-year funding for the postgraduate master's programme International Postgraduate School of Management at the Faculty of Economics and Business – the first institution in Slovenia to receive such support – in cooperation with the Bayreuth Education Centre, the University of Trieste, and Aristotle University of Thessaloniki. The implementation of this international programme involved 21 universities and faculties from 8 countries in Europe and the USA (Hauptman & Oplotnik, 2019). Later, other TEMPUS programmes followed, significantly strengthening the international engagement of EPF UM students and teachers.

In 1997, EPF UM joined the Central European Programme CEEPUS with partners the Vienna University of Economics and Business and the University of Economic Sciences in Budapest. In 1998, EPF UM collaborated with Esbjerg Business Academy in Denmark on the international school IS FEBA. In the academic year 1998/1999, the international school hosted 19 Danish and 5 Slovenian students, and in the following year 15 Danish, 5 Chinese, and 8 Slovenian students (Hauptman & Oplotnik, 2019).

In 1997, EPF UM joined the Socrates-Erasmus programme, an EU action programme aimed at improving the quality of education, providing a European dimension to curricula, increasing opportunities for personal acquaintance with other European countries, strengthening awareness of a common European identity, and enhancing the ability to create and adapt to changes in economic and social life.

By 1999, EPF UM had signed student exchange agreements with 10 European universities and academies, offering 31 study places.

Today, EPF UM has agreements with more than 200 partner universities worldwide. The most important exchange projects since 2009 include: Erasmus+ (KA103), Erasmus+ (KA107), CEEPUS, JOINEUSEE, and BILATERALA.

Table 1: Some aspects of internationalization at EPF UM in numbers

	1959–2019	2014–2024
Number of students who went on exchange abroad	more than 1,300	more than 700
Number of international students who came on exchange to EPF	more than 2,400	more than 2,200
Number of visiting professors and staff from abroad hosted at EPF		more than 500
Number of EPF professors and staff who went on exchange abroad		more than 150

In the last decade, EPF UM has hosted more than 500 foreign visiting professors and professional staff from renowned European and non-European partner universities, as shown in Table 1. During the same period, more than 150 individuals (EPF UM teaching and professional staff) participated in exchanges abroad. In the last decade, EPF UM has hosted more than 2,200 foreign students and enabled more than 700 of its own students to study abroad.

5.1.3 Summer Schools

The first international summer school Summer University Maribor was successfully held 30 years ago, in 1995 (Hauptman & Oplotnik, 2019). Together with partners Vienna University of Economics and Business and the University of Trieste, EPF UM organized summer schools from 1995 to 1998. 99 students from various European countries (Slovakia, Sweden, Croatia, Denmark, Slovenia) enhanced their knowledge through lectures by 14 professors from Slovenia, Sweden, Italy, and the USA. This was an excellent way to promote European cooperation in higher education.

Today, summer schools organized by EPF UM represent an important component of internationalization, focusing on current topics in economics, business, and sustainable development. They feature lecturers from practice and from prestigious business schools in Europe, Asia, and the USA, as well as students from numerous European business schools. Examples include Public Private Partnership: Working for Change and Cooperation (2011–2014), Big Data EU Business Implications (2016–2018), Sustainability in International Business (2022–present, annually).

5.1.4 International Events and Conferences

International scientific conferences, shown in Table 2, have become the most important conferences in the field of management and economics in the region over the past decade.

Table 2: Overview of international conferences at EPF UM in the last decade

Year	Title
2014	7 th International Language Conference: The Importance of Learning Foreign Professional Languages for Intercultural Communication
2015	Conference with Round Table on the Competitive Position of Slovenian Winemakers and Wines in Third-Country Markets
2015	International Conference: Global Conference on Managing in Recovering Markets
2016	9 th International Language Conference: The Importance of Learning Foreign Professional Languages for Intercultural Communication
2017	1 st EPF International Conference: Teaching Methods for Economics and Business Studies
2018	2 nd EPF International Conference: Teaching Methods in Economics and Business Studies
2019	3 rd EPF International Conference: Teaching Methods in Economics and Business Studies
2020	4 th EPF International Conference: Contemporary Challenges in Economic and Business Research
2021	5 th EPF International Conference: Is It Time for a Complete Reset?
2022	6 th EPF International Conference: Challenges in Economy and Business in the Post-Covid Era
2023	7 th EPF International Conference: Strengthening Resilience through Sustainable Economy and Business – Towards Sustainable Development Goals
2024	8 th EPF International Conference: Challenges in a Turbulent Economic Environment and Sustainable Development of Organizations
2025	9 th EPF International Conference: Sustainable Management in the Era of ESG and Artificial Intelligence – Overcoming Challenges and Seizing Opportunities

5.2 The Perspective of the Faculty of Arts

Internationalization has been present at the Faculty of Arts of the University of Maribor (FF UM) since its establishment in 2006 and represents a fundamental pillar of the faculty's development, recognition, and reputation in the international academic space.

The strategic goals and work programme in the field of international activities at FF UM are designed to ensure an active role and openness of the faculty in cross-border, European, and global international cooperation in higher education. The aim is to promote internationalization, knowledge transfer, modern competences, and experiences in higher education pedagogical, professional, and research work in the fields of humanities and social sciences, in accordance with the Internationalization of Higher Education (Direktorat za visoko šolstvo, n.d.) and "ReNPVŠ30" (2022). These strategic goals contribute to the core mission and commitment of FF UM to operate educationally and scientifically in the spirit of intellectual breadth, humanistic values, and active citizenship. Through interdisciplinary collaboration in an international environment, the faculty significantly contributes to shaping Slovenian identity while strengthening values of human dignity, sustainable practices, and intercultural dialogue (Univerza v Mariboru, Filozofska fakulteta, n.d.). With its international visibility in research and education in the humanities and social sciences in Central Europe, FF UM makes a notable contribution to the comprehensive and sustainable development of the European community, socio-cultural integration, and socio-economic development of the region.

5.2.1 International Agreements and Cooperation Contracts, and Student and Staff Mobility

Since its establishment, the Faculty of Arts (FF UM) has signed more than 250 bilateral international agreements with foreign higher education institutions within the Erasmus and CEEPUS mobility programmes. Of these, 50 agreements were concluded in the very first year of the faculty's operation (2006/07), when 28 students went abroad for study and 56 foreign students came to study at FF UM (Koletnik, 2009). This trend, particularly the popularity of FF UM among foreign students, has continued and grown throughout the subsequent 18 years of the faculty's existence. Table 3 presents some quantitative indicators of

internationalization at FF UM in the field of student and staff mobility over the past seven academic years.

The number of incoming students on exchange at FF UM has increased by more than 112% over the past seven years, from 70 to 159 students. There is also a noticeable trend of increasing visits by foreign higher education teachers to FF UM and of outgoing FF UM students participating in international study exchanges at foreign partner institutions. After the pandemic period, outgoing student mobility in 2023/24 reached 79 mobilities, surpassing the level before that period (2018/19). In the last seven years, FF UM has hosted more than 600 foreign students and 76 foreign teaching and professional staff, while enabling 346 students and 66 faculty employees to participate in exchanges abroad.

Table 3: Some aspects of internationalization at FF UM in numbers (Erasmus+ and CEEPUS)

Academic year	Incoming students on exchange at FF	Outgoing students on exchange abroad	Incoming staff on exchange at FF	Outgoing staff on exchange abroad
2017/18	70	84	4	10
2018/19	71	39	20	22
2019/20	66	34	7	6
2020/21	44	19	3	4
2021/22	102	45	12	3
2022/23	132	46	12	8
2023/24	159	79	18	13

5.2.2 Organization of Summer Schools and International Events

Since its establishment, the FF UM has actively participated in the CEEPUS programme – the Central European Exchange Programme for University Studies – alongside the Erasmus programme. CEEPUS promotes student and teacher mobility and joint international cooperation projects among countries in Central and South-eastern Europe. FF UM collaborates within the CEEPUS programme with higher education institutions from 16 countries: Albania, Austria, Bulgaria, Bosnia and Herzegovina, Czech Republic, Montenegro, Croatia, Kosovo, Hungary, North Macedonia, Moldova, Poland, Romania, Slovakia, Slovenia, and Serbia. Currently, nine CEEPUS networks operate at FF UM. The first active CEEPUS network was established in 2007 in the field of geography under the title GEOREGNET

(Koletnik, 2009). FF UM coordinated this network, which included 12 partner institutions: University of Graz, Jagiellonian University in Kraków, University of Ljubljana, University of Novi Sad, University of Olomouc, University of Pécs, University of Prague, University of Prešov, University of Primorska, University of Tuzla, University of Zadar, and University of Zagreb. Other CEEPUS networks later joined GEOREGNET, such as: TRANS – TRANSkulturelle Kommunikation und TRANSlation, E-BOLOGNA – Network for Translation Studies and Transcultural Communication Programmes in Central, Eastern and South-Eastern Europe in the field of translation studies, Inter-American Studies in the field of English and American studies, PACE – Pedagogy and Andragogy in South-East Europe in the field of pedagogy and andragogy, Sociology for Societies – Understanding socio-cultural changes in contemporary societies – Soc4Soc in the field of sociology, Philosophy and Interdisciplinarity in the field of philosophy, Slavic Philology and Its Cultural Contexts, and most recently Macedonian Studies in Central European Slavic and Balkan Context in the field of Slavic languages and literature. Today, FF UM is the main coordinator of the CEEPUS network TRANS. In the past, it also coordinated other networks, such as GEOREGNET and Inter-American Studies.

CEEPUS networks represent an important component of internationalization, as they provide not only individual student and professor mobility but also the content, organizational, and financial basis for organizing international summer schools. The first international summer school, which later became a tradition at FF UM, was organized even before the faculty's formal establishment, in cooperation with the Central European Association for Canadian Studies (CEACS). It focused on English language and literature and the culture of English-speaking nations. In 2008, around 30 students attended the fourth edition of this summer school (Koletnik, 2009). Among the longest-running summer schools is the one within the CEEPUS network TRANS, which in 2024 was organized for the eleventh time under the title: International Translation Summer Academy and Symposium TRANS 2024 – Translation and Transcreation in the Digital Environment. This seven-day summer school, as a project of international cooperation and networking in South-eastern Europe, is intended for foreign and domestic students and professors in the fields of translation studies, linguistics, and intercultural communication. A special contribution of the International Translation Academy to FF UM's internationalization is its joint organization with the Directorate-General for

Translation of the European Parliament and the Faculty of Humanities and Social Sciences at the University of Zagreb (Univerza v Mariboru, Filozofska fakulteta, 2024a). Another active summer school at the faculty is the Slovenian Language Summer School as a Second and Foreign Language – Slovenščina na prvi pogled (Slovenian at First Sight), organized since 2022 by the Department of Slavic Languages and Literatures within the CEEPUS network Slavic Philology and Its Cultural Contexts. This two-week summer school is intended for international students, Slovenian and Slavic language teachers, and translators who study or work in the field of Slovenian language, literature, and culture in Central and South-eastern Europe (Univerza v Mariboru, Filozofska fakulteta, 2024b). Both summer schools are designed as intensive educational programmes consisting of lectures, workshops, language exercises, conversations, round tables, participation in cultural events, and professional excursions, and are credited with 3 ECTS. In the academic year 2024/2025, the summer school within the CEEPUS network GEOREGNET will be reintroduced. Its first international summer school was organized at the end of summer 2008 with 22 students participating (Koletnik, 2009).

In addition to summer schools, FF UM has organized major and current international events since its establishment, such as: Slavic Scientific Reflections at the Department of Slavic Languages and Literatures, International Scientific Symposium of the Department of History, International Conferences of the Department of English and American Studies in cooperation with international associations (e.g., Central European Association for Canadian Studies), International Student Philosophical Symposium, and others. Important aspects of FF UM's internationalization also include participation in joint study programmes, such as: Master in European Studies, Euromediterranean Master in Culture as well as Tourism and Intercultural German Studies.

5.3 Perspective of the Faculty of Education

In the 1970s and 1980s, Slovenia, as part of Yugoslavia, participated in the Non-Aligned Movement, which enabled intensive cooperation with institutions from these countries and also international collaboration of the Pedagogical Academy and later the Faculty of Education of the University of Maribor (PEF UM) (since 1986) (Hauptman Komotar, 2019). A major step toward more active integration into the international environment for PEF UM was the full membership of the Republic of

Slovenia in the European Union and participation in the Erasmus programme. The division of the large PEF UM in 2006 into three new members of the University of Maribor marked a step toward the independent development of the faculty also in the international sphere (Univerza v Mariboru, Pedagoška fakulteta, 2011).

In 2012, the faculty adopted the International Cooperation Programme of PEF UM, which emphasized staff and student mobility, participation in international research and artistic work, inclusion of visiting lecturers in the pedagogical process, involvement in international projects, internationalization of the curriculum through cooperation with foreign higher education institutions, and international activities of professional service staff.

In 2022, PEF UM adopted the Strategic Development Plan of the Faculty of Education UM 2022–2030 (Univerza v Mariboru, Pedagoška fakulteta, 2022), which includes additional strategic directions and goals in many areas, including internationalization. The key building blocks for the future are: strengthening the international visibility of PEF UM, developing various forms of education in foreign languages, actively co-shaping the European and global higher education area, promoting international mobility of staff and students, internationalization at the national level, and harmonizing university services for domestic and foreign students and employees in accordance with European principles and standards.

5.3.1 Concrete Experiences and the Importance of Signed Agreements with International Partners

One of the key pillars of international activities and the internationalization of the PEF UM has, from the very beginning, been inter-institutional agreements concluded with foreign higher education institutions within the frameworks of Erasmus, Leonardo da Vinci, CEEPUS, and the Norwegian Financial Mechanism. These agreements have enabled the exchange of experiences, acquisition of new knowledge, and the establishment of new contacts for teaching and studying abroad, as well as research and participation in international projects.

In addition, bilateral agreements were signed with foreign institutions, primarily from the countries of the former Yugoslavia. These agreements allowed cooperation outside the Erasmus programme at a time when these countries were not yet able to participate in the programme.

5.3.2 Key Measures and Activities Contributing to Internationalization

The internationalization of PEF UM has been significantly driven by student and staff mobility, participation in international networks and projects, and internationally recognized achievements of our researchers, artists, and athletes.

Over the past 10 years, PEF UM has annually maintained between 120 and 150 Erasmus+ inter-institutional agreements in the fields of education, sports, music, and arts with around 100 foreign institutions. Foreign students studying at PEF UM can choose from 100 to 120 course units annually, of which about half are usually delivered for them. Between 6 and 10 course units are jointly delivered for domestic and foreign students (internal PEF UM data on mobility and project involvement in the period 2013–2025, January 2025).

Each year, the faculty typically participates in 18 to 25 international projects, most often co-financed by the Erasmus programme, the European Regional Development Fund, the Recovery and Resilience Plan, and the Norwegian Financial Mechanism. Between 70 and 90 teaching staff, researchers, and professional associates are involved annually in these international projects. Students have also been included for many years; in 2024, 16 students participated in international projects, and each year student projects are implemented where students and mentors collaborate with partners from industry and other sectors. Participation in these international projects strengthens the faculty's research and educational capacity, promotes international cooperation, and contributes to the development of innovative pedagogical approaches (internal PEF UM data on mobility and project involvement in the period 2013–2025, January 2025).

Since 2000, PEF UM has recorded 274 outgoing student mobilities for study and practical training abroad, 634 incoming student mobilities, 503 outgoing staff mobilities for teaching and training, and 243 incoming staff mobilities for teaching and training. Recently, PEF UM students increasingly participate in Collaborative International Programmes (CIP), which combine various forms of learning and cooperation with international partners, enhancing their intercultural understanding, 21st-century skills, and preparing them for successful engagement in a globalized world.

PEF UM frequently includes foreign lecturers in its study process, enriching educational content with their knowledge and experience. Lecturers from Spain, New Zealand, Serbia, Croatia, Montenegro, and the USA have participated in first- and second-cycle programmes. At the doctoral level, a Slovenian professor employed at Harvard University, USA, has contributed.

PEF UM lecturers also engage in pedagogical and research processes at foreign higher education institutions. In recent years, cooperation has taken place with universities in Finland, Austria, Spain, Slovakia, Croatia, Bosnia and Herzegovina, Serbia, USA, Great Britain, and Norway. PEF UM collaborates in delivering the second-cycle study programme Inclusion in Education with the University of Zagreb (Faculty of Education and Rehabilitation Sciences) and the University of Zadar (Department of Teacher and Preschool Education). For the third-cycle programme Educational Sciences, it also cooperates with the University of Zagreb (Faculty of Teacher Education). In the future, the faculty plans long-term cooperation with the University of Novi Sad in implementing a joint second-cycle master's programme in Speech Therapy and Surdopedagogy. The faculty successfully collaborates with the University of Zadar in organizing annual international conferences and publishing monographs and sees new opportunities emerging with Thomas More University (Belgium), North University in Boston, USA, and University of Manchester, Great Britain (internal PEF UM data on mobility and project involvement in the period 2013–2025, January 2025).

PEF UM also participates in international networks. It is particularly active in the KASTALIA network, which connects 16 teacher education institutions covering a wide range of subject areas and all levels of education – from preschool, primary, secondary, and higher education to research.

Participation in the ATHENA European University Alliance provides the faculty access to extensive knowledge resources, new research opportunities, and additional possibilities for collaboration in summer schools, CIP, or joint study programmes.

Higher education teachers and associates habilitated under artistic criteria and employed at PEF UM participate in numerous international events. Annually, they organize 30 to 60 different artistic events, such as art exhibitions, performances, and concerts by higher education teachers and students at the international level. Those

working in artistic fields are active members of international associations and collaborate with foreign artists and artistic organizations.

PEF UM students and graduates achieve outstanding sports results internationally, both as competitors and coaches in various disciplines. Top results have been achieved particularly in cycling, alpine skiing, ski jumping, biathlon, judo, swimming, volleyball, athletics, and artistic gymnastics, significantly contributing to the international visibility of the University of Maribor.

Activities related to organizing summer schools, international events, and collaborations are also important. Organizing international summer schools enables networking among students from different parts of the world. In the past four years, PEF UM has successfully implemented a joint course unit with international student participation in cooperation with Thomas More University (Belgium) as part of its internationalization strategy. The course unit Teach Future Proof has involved more than 250 students from both institutions over the past four years, including over 90 PEF UM students. These programmes allow students to gain valuable international experience and develop competences in a global context. In 2025, the faculty will implement this programme for the first time as an accredited international spring school (internal PEF UM data on mobility and project involvement in the period 2013–2025, January 2025).

5.3.3 Collaboration in Organizing Scientific and Professional Events with International Participation

PEF UM organizes or co-organizes international scientific and professional events every year. The most notable events in the past four years include:

- In 2024, the faculty organized:
 - International Conference Rethinking Childhood III – Teaching for an Inclusive, Technologically Competent, and Sustainability-Oriented Society;
 - International Multiplier Event of the project Culture Nature Literacy;
- In 2023, PEF UM co-organized with the University of Zadar the conference Rethinking Childhood II: Child and Space;
- In 2022, the faculty co-organized the following international events:

- May 2022: Meeting of the Kastalia Network titled Multilingualism and Internationalization at Home, attended by 14 participants from Greece, Belgium, Croatia, Finland, Denmark, Spain, Portugal, Lithuania, the Netherlands, and Romania;
- November 2022: International Week on the theme Future of Internationalization, attended by 8 participants from Serbia, Slovakia, and Belgium;
- May 2022: Co-organization of the conference A Look into the Classroom – From Tradition to Modernity (Croatian Association of Primary Schools);
- May 2022: Co-organization of the conference Didactic Challenges IV: Futures Studies in Education (Josip Juraj Strossmayer University of Osijek);
- September 2022: Co-organization of the 18th International Scientific Meeting Distance Education During the Pandemic – Challenges and Opportunities (University of Primorska Faculty of Education in cooperation with the University of Kragujevac, Faculty of Education in Užice and Jagodina, Serbia);
- In 2021, on the occasion of the 60th anniversary of PEF UM, the faculty organized the International Scientific Conference Perspectives on the Development of Teacher Education in Changing Social Circumstances.

5.4 Perspective of the Faculty of Law

With clear goals of strengthening international visibility, connecting with prestigious foreign universities and institutions, and numerous partnerships in international projects and activities, the Faculty of Law of the University of Maribor (PF UM) continuously enhances its educational process and enriches the experience of the entire academic community. The beginnings of these efforts date back 65 years, when law studies were first introduced in Maribor. Key achievements are presented below by category to illustrate the diversity of internationalization.

5.4.1 Erasmus+ and International Exchanges

The Erasmus programme began in 2001. PF UM was among the first faculties to actively implement the Erasmus programme. Many ideas on how to balance exchanges and achieve equilibrium between outgoing and incoming mobilities contributed broadly to the programme's success. Agreements were concluded with

the most prestigious partners in the EU, and a stable system of teacher and staff exchanges was established. Vesna Rijavec was selected as the Erasmus Ambassador for Slovenia on the programme's 25th anniversary. Another significant achievement is PF UM's membership in the Erasmus Network of the University of Rotterdam, which includes the best universities from each EU country and from 19 countries outside the EU. Exchanges with universities in this network are possible directly. In addition to the network, PF UM has 67 bilateral agreements with universities from the European Union and worldwide (Univerza v Mariboru, Pravna fakulteta, n.d.-a). The number of participants in exchanges has long surpassed the first thousand.

5.4.2 Bilateral Cooperation

PF UM has developed bilateral cooperation with partners outside the Erasmus network in the following countries:

- USA: Wayne State University (notably, this cooperation is particularly intensive; in 2022, the institutions signed a comprehensive agreement to collaborate on joint study programmes at master's and doctoral levels, exchange teaching staff and researchers, and jointly publish articles and edit journals), Hamline University;
- Germany: University of Hannover, University of Göttingen;
- United Kingdom: Kingston University (Know How Fund Programme), Cardiff University;
- Bosnia and Herzegovina: University of Mostar, University of Sarajevo;
- Serbia: University of Belgrade, University of Novi Sad;
- Montenegro: University of Podgorica;
- Uzbekistan: Tashkent State University;
- Armenia: Yerevan State University;
- Albania: Albanian Mediterranean University;
- Russia: Lomonosov Moscow State University, Ural State University (Yekaterinburg), South-Ural State University (Chelyabinsk);
- Japan: Waseda University, Tokyo (Univerza v Mariboru, Pravna fakulteta, n.d.-a).

5.4.3 Visiting Professors at the Faculty of Law and Cooperation of Faculty Members at Foreign Universities

PF UM routinely includes foreign experts in the pedagogical process, consultations, and other activities. Numerous guests cannot be listed exhaustively. Faculty members from PF UM have also taught and conducted research at prestigious foreign universities, including: Waseda University (Tokyo), Ritsumeikan University (Kyoto), Universities of Göttingen, Hamburg, Münster, and Frankfurt (Oder), Philipps University of Marburg, Fordham University (New York), Masaryk University, Portucalense University, University of Pavia, Universities of Vienna and Graz, Universities of Oxford, Cambridge, and Birmingham, University of Bilbao, University of Aruba, University of Lisbon, Nelson Mandela University, Ozyegin University, Max Planck Institute (Hamburg and Luxembourg), University of Leuven, and University of Zagreb (internal PF UM data on academic staff mobility in the period 2008–2024, January 2025).

PF UM professors are recognized internationally, being invited to doctoral dissertation committees and mentoring students at foreign universities. For example, at KU Leuven, PF UM professors have delivered lectures and served on doctoral defence committees. They participate in peer reviews during evaluations of foreign institutions (e.g., Faculties of Law in Vienna and Graz) and in the development of new study programmes (Portugal, Croatia, Montenegro). They are invited to professor appointment committees (Berufungskommission) in Germany and Austria. Within the EU, they have been successful in the Jean Monnet programme and in Marie Curie Sklodowska postdoctoral programmes (Univerza v Mariboru, Pravna fakulteta, n.d.-a).

For over a decade, cooperation between the Universities of Graz and Maribor has included joint seminars, where activities for students in Civil Procedural Law and International Commercial Law were conducted with the cooperation of professors at both universities partly in Maribor and partly in Graz. The international recognition of PF UM's achievements is also reflected in the awarding of honorary doctorates to Vesna Rijavec by the University of Graz and the University of Uppsala (Univerza v Mariboru, 2022).

5.4.4 Cooperation with Foreign Partners in Research Projects (as Coordinators)

PF UM has collaborated with foreign partners in the following research projects:

- Diversity of Enforcement Titles in Cross-Border Debt Collection in EU (EU-EN4s) – 14 EU countries and Albania;
- Train to Enforce – Train 2 EN4CE – 8 EU countries;
- European Investigation Order – Legal Analysis and Practical Dilemmas of International Cooperation (EIO-LAPD) – 6 EU countries; Digital Communication and Safeguarding the Parties' Rights: Challenges for European Civil Procedure – 7 EU countries;
- Simplified Debt Collection in the EU – 13 EU countries;
- Dimensions of Evidence in European Civil Procedure – 8 EU countries;
- Legal Remedies Related to the Enforcement of Foreign Judgements under Brussels Ia (Recast) – 9 EU countries;
- European Enforcement Order – 3 EU countries;
- Reform of Evidence Law in the Digital Age – 9 EU countries;
- UNODC Project on Corruption – 6 EU countries;
- WOODIE – Whistleblowing Open Data Impact, An Implementation and Impact Assessment – 8 EU countries;
- The Culture of Lawfulness: International Workshop on Utilizing the E4J Training Modules in Central European Higher Education – 4 EU countries;
- BRIDGE – Promoting Mutual Understanding and Cooperation between the EU and Belarus, Moldova, Russia, and Ukraine – 8 countries;
- TEMPUS JEP (Joint European Project) POGESTEI – Postgraduate Study Programme on European Integration at Universities in Belgrade, Novi Sad, and Niš – 5 countries;
- TEMPUS JEP Project: Master's Programme on European Integration and EU Neighbourhood Policy – MEINEPO – 5 countries;
- TEMPUS JPCR Project EUNEG – Law of EU Neighbourhood Policy and the Principle of Good Governance – 5 countries (Pravna fakulteta Univerze v Mariboru, Inštitut za civilno, primerjalno in mednarodno zasebno pravo, n.d.; Univerza v Mariboru, Pravna fakulteta, n.d.-c).

5.4.5 Participation of Faculty Members in Editorial Boards of Internationally Recognized Publications and Publishing in the International Arena

Higher education teachers at PF UM serve on editorial boards of internationally recognized publications and publish in the international arena, for example in: *Beiträge zur Rechtsgeschichte Österreichs*, *Common market law review*, *Corruptio*, *Horizonti. Serija A. Opštstveni i humanistički nauki*, *The International Journal of Environmental, Cultural, Economic and Social Sustainability*, *International Journal of Law in Changing World*, *Justicia: revistë ndërkombëtare – shkenkore juridike*, *Law, identity and values*, *Lexonomica*, *Medicine, law & society*, *Yearbook of International & European Criminal and Procedural Law*, *Zbornik radova Pravnog fakulteta u Splitu*, *Pancasila and Law Review*, as reflected in Cobiss (Univerza v Mariboru, Pravna fakultet, n.d.-a).

5.4.6 International Conferences and Summer Schools, Student Competitions

By organizing summer schools and conferences, PF UM demonstrates its commitment to connecting theory and practice. It also participates in the most relevant summer schools organized by others, such as the Summer School of Civil Law at Université Paris II Panthéon-Assas, the Alpbach Summer School on European Integration, and the Public and Private Justice seminars at IUC Dubrovnik.

Students successfully take part in prestigious international competitions, such as: Willem C. Vis International Commercial Arbitration Moot, Philip C. Jessup International Law Moot Court Competition, European Law Moot Court, All European International Humanitarian and Refugee Law Moot Court Competition, (Univerza v Mariboru, Pravna fakulteta, n.d.-b).

5.5 Perspective of the Faculty of Organizational Sciences

The Faculty of Organizational Sciences of the University of Maribor (FOV UM) operates across a broad field of organizational sciences, encompassing three main pillars, namely information systems, human resources and educational systems, and

business systems engineering; it places internationalization at the core of its development and recognition within the global academic environment. The faculty's activities are directed towards active engagement and visibility in the international arena, striving to expand international cooperation, increase the number of partnerships, and promote staff and student exchanges. These processes contribute to improving the quality of education and research.

Within the Development Strategy of the Faculty of Organizational Sciences of the University of Maribor 2022–2027 (Fakulteta za organizacijske vede, n.d.), five strategic objectives in the field of internationalization are clearly defined, committing the faculty to continuous development in international cooperation, the exchange of best practices and dissemination of knowledge across the broad domain of organizational sciences, and the development of programmes in line with international guidelines and trends, ensuring international recognition within the academic community. FOV UM relies on the values of social responsibility, sustainable development, and excellence in delivering educational, scientific-research, and professional activities, in accordance with international standards and a commitment to excellence.

Today, FOV UM has around 25 bilateral agreements, most within the Erasmus+ and CEEPUS programmes. Since the academic year 2004/05, students have been integrated into the European Education Area through the Erasmus-Socrates programme, and in 2007 FOV UM joined the Erasmus programme. Within the Research Centre, faculty researchers are involved in numerous international projects.

Research projects play a key role in promoting internationalization and expanding academic influence at the international level. They enable the exchange of knowledge, experience, and best practices, breaking down barriers between different cultural and academic environments, while serving as an important source for developing innovative teaching methods and research approaches. Currently, 17 international research projects funded by the European Union are underway.

5.5.1 Beginnings of the Faculty and International Engagement

The origins of the faculty date back to 1959, when the Junior Personnel and Social College was established. In 1965, it was renamed the Junior College of Work Organization and was then a leading educational institution in the field of personnel

and organization, also in other countries of the former Yugoslavia. Following the example of this junior college, similar institutions emerged in Zagreb and Belgrade, the latter later evolving into the Faculty of Organizational Sciences in Belgrade. The Junior College of Work Organization operated with study departments in several organisations both domestically and in Croatia and Bosnia and Herzegovina, and its wider recognition led to the establishment of the first foundations for conference activities in 1967, when it organized the Yugoslav symposium on responsibility in work organizations. In 1971, the then-named Junior College of Work Organization joined the Association of Higher Education Institutions Maribor and later, in 1975, became one of the founding members of the University of Maribor (Fakulteta za organizacijske vede, 2009).

5.5.2 International Accreditations

The international recognition of second-cycle study programmes is confirmed by the ECBE – European Council for Business Education accreditation obtained in 2009, whose primary mission is to promote and maintain the highest standards of excellence in management education within the European area. The ECBE accreditation demonstrates FOV's commitment to continuous improvement and modernisation of its pedagogical and research work.

5.5.3 International Conferences

Conference activities at FOV UM have a long-standing tradition. Conferences bring together experts from domestic and international environments, who share their research achievements with the wider public, while also involving students at all levels of study in the international research space.

The International Bled eConference, which began in 1988, started as the first consultation on computer data exchange (Fakulteta za organizacijske vede, 2009). The conference focuses on key topics such as digital transformation, artificial intelligence and machine learning, data analytics and business intelligence, blockchain and digital currencies, e-government and digital society, cybersecurity, and many others. The conference, with an international programme committee, attracts around 250 participants from more than 25 countries each year, and since 2008, papers have been included in the ISI Conference Proceedings Citation Index,

indicating the high quality and recognition of contributions at the conference. Conference themes for the past 10 years are presented in Table 4.

Table 4: Overview of international conferences at FOV UM since 2015

Conference	Year	Conference Theme
Bled eConference (BeC)	2025	38 th BeC Empowerment for Transformation: Shaping the Digital Future for All
	2024	37 th BeC Resilience through Digital Innovation: Enabling the Twin Transition
	2023	36 th BeC Digital Economy and Society: The Role of Digital Innovation in Times of Instability
	2022	35 th BeC Digital Restructuring and Human (Re)Action
	2021	34 th BeC Digital Support from Crisis to Progressive Change
	2020	33 rd BeC Digital Restructuring and Human (Re)Action
	2019	32 nd BeC Bringing Technology Closer to People for Sustainable Societal Development
	2018	31 st BeC Digital Transformation: Managing Challenges
	2017	30 th BeC Digital Transformation – From Connecting Things to Transforming Our Lives
	2016	29 th BeC Digital Economy
	2015	28 th BeC E-Services for Well-being
International Conference on Organizational Science Development (ICOSD)	2024	43 rd ICOSD Green and Digital Transition – Challenge or Opportunity
	2023	42 nd ICOSD Interdisciplinarity Matters
	2022	41 st ICOSD Societal Challenges as Opportunities for Organizations
	2021	40 th ICOSD Values, Competences and Changes in Organizations
	2020	39 th ICOSD Organizations at the Crossroads of Innovation and Digital Transformation
	2019	38 th ICOSD Organizational Ecosystem in the Age of Digitalization
	2018	37 th ICOSD Organization and Uncertainty in the Digital Era
	2017	36 th ICOSD Responsible Organization
	2016	35 th ICOSD Sustainable Organization
2015	34 th ICOSD Internationalization and Cooperation	

The International Conference on Organizational Science Development began in 1981 as an annual consultation of work organizers and received its current name in 2003 (Fakulteta za organizacijske vede, 2009). Current topics include organization and management, informatics, business systems engineering, human resource management, social responsibility, e-learning, business models, business process management, and quality management. Highlights of conferences since 2015 are shown in Table 4. It is worth noting that the International Conference on Organizational Science Development is the oldest conference at UM.

The faculty also participates as a co-organiser in various international conferences, such as SOR (International Symposium on Operations Research in Slovenia) and Information Society.

5.5.4 Summer Schools and Other Forms of Cooperation (Mobility Weeks, Study Visits)

The first international summer school at FOV UM was organised in 2009 as part of the International eConference, with a programme focused on various aspects of using modern information and communication technologies for innovative business. Students from Croatia and North Macedonia attended lectures delivered by domestic lecturers and professors from the Netherlands and China. Since 2021, the faculty has been organising a summer school entitled Organization, Management and Society, where students acquire basic knowledge in areas such as human resource competences, fundamentals of entrepreneurship and business idea development, integration of engineering into the green and digital transition, application of artificial intelligence, international marketing, and this year's central theme – gamification. With the knowledge gained, students tackle a real-world challenge in the form of a case study and present their solutions at the end. FOV UM students also actively participate in summer schools abroad, organized mainly as Blended Intensive Programmes (BIPs), which combine short-term physical mobility with a virtual component, thus providing students with a brief parallel international experience alongside their studies at the home faculty.

During mobility weeks, networking with peers in the international environment is key to spreading ideas and transferring knowledge. Through workshops and lectures at these events, the international activities of the University of Maribor, the faculty's study programmes, and research activities are promoted. Exchanging ideas and experiences with colleagues from different countries contributes to knowledge transfer and the improvement of pedagogical and research approaches, while new acquaintances also present opportunities for concluding new agreements and fostering closer cooperation in the future.

For several years, the faculty has successfully organized study visits for both students and staff to various work environments in the European neighbourhood, where students can learn about work organization and leadership in large international corporations and partner institutions. Study visits are an excellent opportunity to broaden knowledge and discover diverse best practices that both students and employees can implement in their respective fields of activity.

5.5.5 Organizacija Journal

An important channel of internationalization is the journal *Organizacija*, the origins of which date back to 1963, when a publication entitled *Kadrovska politika – strokovni in informativni časopis za vprašanja kadrovske politike* (Eng. *Personnel Policy – Professional and Informative Journal for Personnel Policy Issues*) was first issued. In 1994, the journal was renamed *Organizacija* with the subtitle *Revija za management, informatiko in kadre* (Eng. *Journal for Management, Informatics and Personnel*). Since 2008, it has published original scientific articles in English (professional articles could still be published in Slovenian), and since 2013, all publications have been exclusively in English, which increases their reach and dissemination of innovative ideas in the international arena. The journal, with an international editorial board, is included in numerous bibliographic databases and indexes, among others in Scopus and Web of Science – Emerging Sources Citation Index, and is also published on the website of the Sciendo publishing house (part of De Gruyter) (Fakulteta za organizacijske vede, 2009).

5.6 Perspective of the Faculty of Criminal Justice and Security

5.6.1 Foundations of International Cooperation

International cooperation of the Faculty of Criminal Justice and Security of the University of Maribor (FVV UM) began more than four decades ago, when the faculty was still the Junior College of Internal Affairs and started establishing connections beyond the borders of Slovenia, which at that time was part of Yugoslavia. The first steps on what is now the international stage included partnerships with related schools in Zagreb, Belgrade and Skopje. A real breakthrough occurred in the late 1980s, when the Junior College began establishing relations with police academies in Wiesbaden and Münster in Germany, as well as with educational institutions in Italy and Austria (Meško, 2023; Sotlar et al., 2023). These early collaborations laid the foundations for the faculty's current international engagement.

In the 1990s, the international activities of the Junior College of Internal Affairs and later the College of Internal Affairs became more ambitious. The Junior College of Internal Affairs joined the Central European Police Academy (MEPA), participated

in the design and implementation of its programme, and was involved in the management of the academy. Through the academy, it established contacts with other high-level police schools from Poland, Hungary, Austria and the Czech Republic. A very important milestone in international cooperation was the organization of the first biennial conference Policing in Central and Eastern Europe in 1996, which became and has remained an important meeting point for scientists and practitioners in the field of criminal justice from East and West, particularly Central Europe and the Western Balkans (Meško, 2023).

5.6.2 Global Recognition and Contemporary International Initiatives

The transformation into a faculty and integration into the University of Maribor at the beginning of the 21st century brought a significant expansion of the faculty's international cooperation. This was also supported by international research projects involving partnerships with prestigious institutions such as the University of Cambridge and Michigan State University. One of the first and most notable initiatives was the CRIMPREV project, which ran from 2006 to 2009. Research projects have always been at the heart of the faculty's international cooperation. In the Daphne project, which ran from 2004 to 2006, a handbook for victims of stalking was created, demonstrating the faculty's commitment to addressing current social issues. This was followed by EEMUS (European Master's Programme in Security in Local Communities), URBIS (establishing a European doctoral programme in local security management), ARIEL (focused on the infiltration of organised crime into legitimate economic activities), Water Crimes (project on limited water resources and forms of crime related to water), IMPRODOVA (aimed at improving responses to domestic violence), and SHINE (focused on preventing and managing sexual harassment in nightlife) (Meško, 2023; Sotlar et al., 2023). These and other projects highlighted the faculty's ability to address a wide range of security issues through international cooperation. Such collaborations not only enhanced the faculty's research capacity but also positioned it prominently on the global academic stage.

After joining the University of Maribor, an intensive process of student and staff mobility began under the Erasmus programme. Within just a few years, mobility reached such proportions that it became the cornerstone of the faculty's international strategy, which in 2012 adopted its first international cooperation

programme. Through programmes such as Erasmus+ and Swiss Mobility, the faculty enabled exchanges of students and staff with partners across Europe. The exchanges were not only aimed at knowledge transfer; they also included practical visits to Slovenian institutions, giving foreign students and professors a comprehensive understanding of the local context. Students have had numerous study visits to institutions, companies and civil initiatives in the field of security. Between 2006 and 2009, the faculty participated in a student exchange project for criminology students from Australian and European universities. During this period, fifteen FVV UM students studied at Australian universities, while fifteen Australian students studied in Slovenia. Between 2006 and 2023, under the Erasmus programme, 193 students went on exchange, and 265 foreign students came to the faculty. Today, partner institutions from 40 countries cover almost the entire European area. Foreign students coming for Erasmus exchange have access to courses in English and are also introduced to the practical work of various institutions in Slovenia, such as the police, correctional facilities, non-governmental organisations and local communities (Sotlar et al., 2023).

International strategic partnerships have played a key role in the development of the faculty. In the past two decades, there has been intensive cooperation with several prominent international organizations, such as the European Group for the Study of Norms (GERN), European Society of Criminology (ESC), American Society of Criminology (ASC), Association of Doctoral Programmes in Criminology and Criminal Justice (ADPCCJ), Organization for Security and Co-operation in Europe (OSCE), United Nations Development Programme (UNDP), United Nations Academic Impact (UNAI), Geneva Centre for Security Sector Governance (DCAF), Global Initiative against Transnational Organized Crime (GI-TOC), Max Planck Balkan Criminology Network (MPBCN), European Union Agency for Law Enforcement Training (CEPOL) and European Crime Prevention Network (EUCPN) (Meško, 2023; Sotlar et al., 2023).

Conferences have always been part of the faculty's international strategy, as has networking. In addition to the already mentioned conference from 1996 (Criminal Justice and Security in Central and Eastern Europe), it is worth noting the European Criminology Conference in 2009, organised by the faculty together with the University of Ljubljana and the Slovenian Academy of Sciences and Arts, as well as the high-profile international criminalistics conference in 2011. In 2017, FVV UM

also began organizing international conferences in the field of information security. The first was called the Central European Cybersecurity Conference, and since 2019, it has been renamed the European Interdisciplinary Cybersecurity Conference to emphasise interdisciplinarity and broaden its reach. The conference brings together researchers and practitioners in the field of cybersecurity in Europe and promotes dialogue between computer scientists and researchers from other fields such as behavioural sciences, sociology, criminology, investigation and law (Meško, 2023; Sotlar et al., 2023).

In 2008, the faculty organised an international undergraduate summer school in Piran, and in 2018 a doctoral summer school in Ljubljana. The faculty also participated in the implementation of GERN doctoral schools at universities in Dortmund (2016) and Porto (2019) (Meško, 2023). The development of FVV UM thus reflects a transformation and growth driven by a commitment to international cooperation. From early partnerships within the former Yugoslavia to its current status of global recognition in the field of security studies, the faculty has consistently strived to broaden its horizons and integrate into the international academic community.

Members of the Faculty of Criminal Justice and Security serve on numerous editorial boards of international journals, among which the most notable are: *European Journal of Criminology*, *European Journal of Crime, Criminal Law and Criminal Justice*, *Crime and Deviance*, *Criminal Justice and Behavior*, *International Criminology*, *Journal of Applied Security Research*, *Journal of Investigative Psychology and Offender Profiling*, *Policing – An International Journal*. One of the faculty members served as President of the European Society of Criminology (2018) and is also a recipient of awards for scientific excellence and the development of criminology and criminal justice studies from the American Society of Criminology (ASC, 2022) and the Academy of Criminal Justice Sciences (ACJS, 2024) at the global level. Through active partnerships, research projects, educational exchanges and conferences, the faculty has built a vibrant network of global collaborations that continue to shape its future.

6 Challenges and the Future of Internationalization

The University of Maribor has a rich history and a number of key achievements in the field of internationalization, reflecting its successful approach to integration into the global academic world. Since the 1990s, the University of Maribor has pursued strategic internationalization that has gone beyond mere mobility of students and professors, transforming into a comprehensive integration of international dimensions into educational and research activities.

Based on the Council Resolution on a Strategic Framework for European Cooperation in Education and Training towards the European Education Area and Beyond 2021–2030, adopted in 2021, the future of internationalization promises intensive networking among higher education institutions. This framework sets strategic priorities for improving the quality, inclusiveness, and digital and green dimensions of education systems in the European Union. Among the key objectives are strengthening European tertiary education, creating transnational alliances, pooling resources, mobility and cooperation, and promoting research and innovation (“Resolucija Sveta o strateškem okviru za evropsko sodelovanje v izobraževanju in usposabljanju pri uresničevanju evropskega izobraževalnega prostora in širše 2021–2030”, 2021).

The recommendations of the Council of the European Union from 2022 call for the development of joint study programmes, a European degree, innovative transnational activities, and deeper cooperation in higher education. The Council of the European Union advocates strengthening the European dimension of higher education, research and innovation, and synergies between them, supporting alliances of higher education institutions such as “European Universities”, and expanding the European Student Card initiative (“Priporočilo Sveta z dne 5. aprila 2022 o vzpostavljanju povezav za učinkovito evropsko sodelovanje na področju visokošolskega izobraževanja”, 2022).

In the field of science, the European Commission and the Council of the European Union in 2021 emphasised strengthening an open research and innovation environment based on common principles and values. EU Member States are committed to applying shared values for research and innovation: excellence, open science, ethics, freedom of research, gender equality, free flow of knowledge, value

creation and societal impact (“Priporočilo Sveta (EU) 2021/2122 z dne 26. novembra 2021 o Paktu za raziskave in inovacije v Evropi”, 2021).

Slovenia’s National Strategy for the Internationalization of Higher Education until 2030 defines three priority areas: active involvement of Slovenian higher education in the EU, internationalization at home by integrating international dimensions into the curriculum, and international student mobility that promotes shorter forms of exchange (Direktorat za visoko šolstvo, n.d.). The University of Maribor is preparing for future challenges, which will include rapid adaptation and digitalisation to improve the quality of education, strengthen social responsibility, and ensure the implementation of the principles of global cooperation.

Despite clear European and national guidelines for the future development of internationalization, which see it not merely as a goal but primarily as a means or a set of tools through which higher education institutions improve the quality of education and research and strengthen their socially responsible role, ensuring the implementation of the principles of global cooperation, inclusion and socially responsible sharing of knowledge and innovation may in the future be under pressure from changing political and economic conditions, which will potentially require adjustments by the University of Maribor. Rapid responsiveness and adaptability will be a challenge likely closely linked to the degree of digitalisation and the range of developed innovative forms of mobility, which in themselves will not depend on such changing factors.

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SUSTAINABLE GROWTH OF THE UNIVERSITY OF MARIBOR: ADVANCING QUALITY, INNOVATION, AND COMPETITIVENESS FOR A SECURE FUTURE

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The University of Maribor, as a prominent higher education institution, recognizes that quality and sustainable development are intrinsically linked and essential for its long-term competitiveness and stability. This chapter provides an overview of the University of Maribor's quality assurance mechanisms, analyses the current state, and highlights key challenges and opportunities within global higher education trends. Special attention is given to the shift from quantity to high-quality research and teaching, digital transformation, internationalization, and the university's integration into the social and economic environment. The analysis compares the University of Maribor with other universities on global rankings and examines how it can strategically respond to growing competition and regional shifts in research. The focus is on developing sustainable models that encompass environmental, economic, social, and ethical aspects. The chapter explores how the University of Maribor, through a holistic approach and systematic quality improvement, can strengthen its role in sustainable development and contribute to a secure, innovative, and competitive society. Based on these findings, it outlines a vision for the University of Maribor's future, emphasizing the integration of academic excellence with societal and economic challenges, interdisciplinarity, breakthrough research, and sustainable innovations as key strategies for enhancing its global recognition.

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1 Introduction

Universities are among the key actors in the development of knowledge, innovation, and social progress. Their role in sustainable development goes beyond merely caring for natural resources and encompasses the complex interdependence of economic, social, and environmental factors. The quality of a university is a fundamental pillar of its long-term success, as it ensures competitiveness in the global academic space and enables a proactive contribution to addressing contemporary societal challenges.

Sustainable development is not merely an environmental concept but a comprehensive strategy that includes the long-term sustainability of economic and human resources, strengthening social cohesion, and adapting to dynamic changes in the educational and research landscape. This holistic approach is based on the principles of systems thinking and continuous improvement, with universities shaping their strategies in line with three key dimensions of sustainability – economic, social, and environmental aspects – often referred to as the triple bottom line.

The development of quality at the University of Maribor is inseparably linked to sustainable development. The University of Maribor recognises that quality is not merely an academic category but a process that transcends the boundaries of educational activity and extends into the broader social and economic environment. Efforts to ensure quality are not focused solely on academic excellence and research achievements but also on creating sustainable strategies that contribute to the holistic development of society.

Over the past decades, the University of Maribor has established a solid foundation in the field of quality assurance and sustainable development. As the first among Slovenian public universities, the University of Maribor established its professional service for quality in March 2006. A key role in shaping the first strategic directions was played by Lučka Lorber, who, as Vice-Rector for Quality Development (2011–2018), led the introduction of the internal quality system, participated in the first institutional evaluations, and contributed to the success of the first institutional accreditation renewal process at the Slovenian Quality Assurance Agency for Higher Education (NAKVIS) (Lorber, 2011). Her work continued with the establishment

of the Department for Quality and Sustainable Development (2015–2017), which strengthened the university's links with industry and local communities and enabled the signing of 24 cooperation agreements (Lorber, 2017). As she herself emphasises, universities today can no longer ignore sustainability principles, as these are already embedded in the accreditation processes of leading global universities (Lorber, 2024).

Her successors, Vice-Rectors for Quality Janja Hojnik and Bojan Dolšak, have built on these foundations. During her term, Janja Hojnik reinforced the focus on the internationalization of quality at the University of Maribor and highlighted the importance of qualitative assessment in evaluating teaching and, in particular, research work, thereby increasing the university's comparability with the international academic environment. She also coordinated the preparation and adoption of the University of Maribor's Code of Ethical Conduct, which is mandatory for all staff and students and through which the university implements its social responsibility and strengthens ethics in teaching, research, and knowledge transfer to society. Bojan Dolšak continues with the development of internal evaluation models and the systematic linking of quality with the long-term development goals of the University of Maribor, emphasising the importance of involving all stakeholders in monitoring and quality assurance processes.

An important role in shaping and implementing internal evaluation mechanisms was also played by Franci Čuš, long-time Chair of the Committee for University Quality Assessment (KOKU). Since the introduction of formal quality monitoring at the University of Maribor in 1997, he has participated in preparing key documents and procedures that laid the foundations for systematic evaluation of pedagogical, research, and artistic work. His professional work had a broader impact, as he chaired the National Commission for Quality in Higher Education of the Republic of Slovenia, served as a member of the Council for Higher Education, and the Council of the National Agency for Quality in Higher Education. By establishing the internal evaluation model, together with Miha Pauko, MSc, he enabled continuous improvement of the university's quality and its alignment with national and European standards, which contributed to strengthening the University of Maribor's competitiveness in the academic sphere. In 2008, KOKU initiated a project of internal institutional evaluations within the University of Maribor. Between 2008 and

2017, 13 internal and 9 so-called follow-up internal evaluations of the university's members were carried out (Pauko, 2011).

In addition to developing internal quality mechanisms, the University of Maribor also integrated broader principles of sustainable development and social responsibility into its strategy. An outstanding contribution in this area was made by Matjaž Mulej, an internationally recognized expert in systems theory (ranked among the top 0.28% of researchers in this field worldwide according to ScholarGDP 2024) and innovation management, whose work significantly influenced the development of the concept of social responsibility as a systemic approach to university governance and its impact on society at large. Through numerous international publications (Mulej et al., 2013, 2015, 2021a, 2021b), he established the link between holistic thinking, innovation, and sustainable development, emphasizing that social responsibility is a necessary condition for the long-term success of universities and the economy. In cooperation with the Institute for the Development of Social Responsibility (IRDO), he organized conferences and prepared several publications on how universities can contribute to an innovative, sustainable, socially responsible society (Mulej et al., 2020a, 2020b, 2024a, 2024b).

From the perspective of long-term quality development and strategic positioning of the university within the broader European and global academic space, a key role was also played by Peter Glavič, who, as one of the leading researchers in higher education policy and scientific metrics, highlighted the importance of linking the university with industry and strategically directing scientific research activities in line with global trends (Glavič, 1998a, 1998b, 2020). Through his work in various professional bodies, including the Slovenian Research Agency (ARRS) and the Research Community of Slovenia, he contributed to the development of criteria for evaluating research excellence and promoted greater international visibility of Slovenian universities. He also actively participated in developing sustainable strategies for the University of Maribor, particularly in the fields of energy, circular economy, and the concept of an “age-friendly university” (Glavič, 2020).

Danijel Rebolj also played an important role in promoting sustainable development at the University of Maribor. As rector, he actively supported the integration of sustainability principles into the university's daily operations, especially in the area of sustainable mobility. By personal example, he encouraged the efficient use of

natural resources and emphasized individual responsibility in shaping a sustainable future. His efforts were reflected in various initiatives that raised awareness within the academic community about the importance of sustainable practices. As moderator of the sustainability conference at the University of Maribor (January 15, 2025), he particularly emphasized the role of science in the transition to a sustainable society and the importance of responsible application of sustainability principles (Rebolj et al., 2013).

The University of Maribor recognizes that long-term competitiveness is based on continuous quality improvement, systematic integration of sustainability principles, and proactive adaptation to global challenges. Sustainable development is not merely a final goal but a dynamic process requiring a strategic approach, interdisciplinary cooperation, and innovative solutions. The concept of sustainability goes beyond environmental aspects and includes economic, social, and ethical dimensions. The key challenge of modern development is finding a balance between resource exploitation, environmental responsibility, and the long-term consequences of today's decisions for future generations (Vovk, 2020; Vovk & Davidović, 2023). Thus, sustainability is not only an ecological issue but also encompasses social justice, economic stability, and ethical responsibility in shaping the future.

In this context, sustainable business becomes a key factor for the long-term success of organizations, including universities. Public institutions and companies increasingly realize that business cannot be separated from the environmental, social, and ethical context in which they operate (Vovk, 2020). Therefore, it is essential for universities to actively respond to the needs and changes of the broader environment. Intergenerational cooperation plays a crucial role in this, as only through the transfer of knowledge and experience between generations can we achieve sustainable development in the broadest sense of the word. To this end, the University of Maribor established the Centre for Professors Emeriti and Retired Higher Education Teachers in 2019 and joined the global network of age-friendly universities in 2020, thereby actively implementing guidelines and principles that promote intergenerational connectivity and sustainable knowledge development. As Rector Zdravko Kačič emphasized: "Recognizing the importance of strengthening good interpersonal relationships, a culture of dialogue, and intergenerational connectivity, we wanted to bridge a certain generational gap and join those worldwide who are 'breaking new ground' in this area." (Kačič, 2023)

Sustainable business is based on several key aspects (Vovk, 2022; Vovk et al., 2023). Environmental sustainability means a responsible attitude toward nature, rational resource management, and reducing emissions, waste, and climate change impacts. Economic sustainability ensures long-term organizational stability and fosters innovation, taking into account the impacts of digitalization, crisis response, and geopolitical changes. In the current situation, with 57 armed conflicts worldwide, geopolitical risks are becoming a key factor of economic and social uncertainty. Social sustainability focuses on fairness and an inclusive work environment that respects human rights and reduces social inequalities, especially in light of rising poverty and unequal resource distribution. Ethical sustainability requires long-term responsible planning in economic and political spheres.

Universities play an important role in the transition to a sustainable society, as they are generators of knowledge and innovation that can contribute to optimal resource use and the development of advanced sustainable technologies. This enables sustainable development to be based not only on consumption reduction and savings but also on transforming the economy through innovative technological and organizational solutions. In this context, organizations and companies increasingly invest in reducing energy consumption, optimizing logistics processes, using recycled materials, and developing a circular economy. A key strategy is also building partnerships with various stakeholders – NGOs, local communities, and industry – to co-create innovative sustainable solutions (Vovk, 2014).

Sustainable development is not merely a choice but a necessity for the long-term stability of organizations, the economy, and society as a whole. Without respecting natural cycles and resource limitations, a sustainable economy is impossible, as natural resources, human capital, and social stability form the foundation of all societal progress. Universities bear a particularly great responsibility in this regard, as their research activities and educational programmes shape new development models that contribute to the long-term stability and prosperity of society.

This paper analyses the sustainability and quality of the University of Maribor and highlights key strategic challenges and opportunities for strengthening its position in the global academic space. First, we present the broader context of sustainable development and university quality, then assess the current state of quality at the University of Maribor and outline its strengths and challenges. This is followed by

an analysis of global trends affecting university development and an overview of strategic directions through which the University of Maribor can enhance its competitiveness and sustainability orientation. The central thesis of this paper is that sustainability is not merely a goal but an ongoing process that can only be achieved through a focus on quality, systematic improvements, and proactive adaptation to global changes.

2 National Strategy and Quality Development at the University of Maribor

The development of quality in higher education is defined in both national strategic documents and the strategic documents of the University of Maribor primarily through the concept of continuous improvement, or building a so-called culture of quality, which ensures the institution's developmental orientation across all areas of its activities.

2.1 National Framework and Strategic Directions

Quality and the processes that must be established and implemented to ensure planning, implementation, evaluation, and action toward progress have been included as key aspects of higher education development in the strategic documents and acts of the Republic of Slovenia and the University of Maribor since the first definitions of higher education in Slovenia and Maribor. These aspects were more explicitly defined by the Republic of Slovenia in the Resolution on the National Higher Education Programme 2011–2020 (“Resolucija o Nacionalnem programu visokega šolstva 2011–2020 (ReNPVŠ11-20)”, 2011) and later in the Resolution on the National Higher Education Programme until 2030 (“Resolucija o nacionalnem programu visokega šolstva do 2030 (RENPVŠ30)”, 2022). In the latter, one of the key strategic objectives is defined as upgrading the quality and efficiency of the higher education system in line with the principles of the Bologna Process. “RENPVŠ30” (2022) explains this goal as ensuring higher education that will function as a sustainability-oriented, internally diverse, self-renewing, and resilient ecosystem, responsive to external and internal changes, capable of adapting to the rapidly changing needs of society, offering attractive and up-to-date study programmes, and recognizing the potential of a broad student population as active co-creators of modern society (Vovk, 2023). Higher education will adhere to the

principles of the Bologna Process, such as coherence, mobility, quality, employability, competitiveness, and relevance, so that it will be comparable with European development directions and will promote knowledge exchange and the internationalization of higher education. Higher education institutions will actively contribute to societal progress in their core missions: education, research, art, professional work, knowledge transfer to the environment, and contributions to social and economic innovation. They will provide student-centred, high-quality education based on research, professional, or artistic work; achieve internationally comparable excellence and target quality levels in research; and, together with independent research institutions, act as key carriers of fundamental research in Slovenia. In the field of art, they will achieve internationally comparable excellence. A comprehensive knowledge transfer system will significantly contribute to strengthening society as a whole and increasing the competitiveness of the Slovenian economy. Undergraduate study programmes will include sufficient practical training, comparable to other European countries, providing appropriate practical knowledge to facilitate young people's transition to the labour market after graduation.

2.2 Development of Quality at the University of Maribor

The University of Maribor has consistently followed the strategic integration of concepts and related processes for monitoring and ensuring quality at the national and European levels, and in certain areas, it has even led related national discussions. While presiding over the Rectors' Conference of the Republic of Slovenia (RKRS), the University of Maribor organized a conference on March 29, 2012, titled Commitment of Slovenian Universities to Developing a Culture of Quality, which resulted in an RKRS resolution emphasizing the importance of promoting university internationalization, strengthening visibility in the international arena, social responsibility, and ensuring material conditions that enable development and competitiveness. Similarly, both in the University of Maribor Development Strategy 2013–2020 (Univerza v Mariboru, 2014) and the University of Maribor Strategy 2021–2030 (Univerza v Mariboru, 2021), a dedicated chapter and significant attention are given to quality development, even though continuous improvement goals are embedded in practically all areas defined by these strategic documents. By 2030, the University of Maribor has focused its objectives in the chapter Development through the Quality System on developing an internal quality system that primarily supports the implementation of strategic development priorities,

fosters and advances a culture of quality based on responsibility, ethics, transparency, and stakeholder inclusion, and emphasizes effective completion of the quality cycle at all levels (Univerza v Mariboru, 2021).

It can be concluded that the University of Maribor's goals and planned measures align with the guidelines and policies of Slovenia and the European Union, which, for example, in the Council Resolution on a Strategic Framework for European Cooperation in Education and Training toward the European Education Area and Beyond (2021–2030) (“Resolucija Sveta o strateškem okviru za evropsko sodelovanje v izobraževanju in usposabljanju pri uresničevanju evropskega izobraževalnega prostora in širše (2021–2030)”, 2021), identifies as Strategic Priority 1 the Improvement of Quality, Equity, Inclusion, and Overall Success in Education and Training, viewing this as a key lever for reducing social, economic, and cultural inequalities. Similarly, the quality of education and research, as well as the processes that ensure it, are defined as key elements of higher education development in the Standards and Guidelines for Quality Assurance in the European Higher Education Area, which serve as a reference document for guidelines issued by the European University Association (EUA) and for criteria prescribed by NAKVIS.

Summarizing the current state of quality at the University of Maribor, based on the latest external evaluation by an international expert group during the university's accreditation renewal in 2022 and findings from the annual self-evaluation of its members (most recently in 2024), the main strengths include: a comprehensive and well-functioning internal quality monitoring and management system that clearly defines processes for completing the quality cycle; historically effective integration of the university and its members into the local environment and strong connections and cooperation with industry; activities and measures aimed at creating an inclusive, innovative, and collaborative academic environment; care for the well-being of staff and students; a diverse range of educational programmes and international mobility opportunities; numerous services supporting students' holistic growth and development, based on a partnership approach that respects diverse needs and emphasizes a student-centred educational process; a well-developed tutoring system; a rich offering of extracurricular activities and active student involvement in project work. Among the university's strengths is also its orientation toward innovative, sustainable, and socially responsible societal development, reflected in numerous projects and the integration of such content into study programmes, as well as

growth in artistic and project achievements. Positive trends continue in scientific research activities, particularly in securing basic and applied projects, including international ones. However, this latter observation must be viewed in the broader context of the competitive international research space, where competitiveness and relevance depend not only on stable growth of an individual institution but also on the relative speed of this growth compared to others – a topic discussed in the next chapter.

3 Challenges and Opportunities for Improving Quality at the University of Maribor

Despite positive trends in quality development, the University of Maribor still recognizes numerous opportunities for improvement and challenges dictated by the global competitiveness of the higher education space. The key question is how to ensure long-term growth of scientific research activities, strengthen the university's integration into international flows, and at the same time remain responsive to changes in the regional and global academic environment.

3.1 Opportunities for Further Quality Development at the University of Maribor

Particularly in the field of scientific research, there are still untapped capacities that offer possibilities for improvement. Both the external evaluation by NAKVIS and the university's internal self-evaluation highlight the need to establish even more effective mechanisms to encourage researchers to publish in the highest-quality scientific journals, especially internationally, and to shift from quantity of publications to quality and impact. Further opportunities lie in more active and interdisciplinary collaboration among researchers and in creating a reward system for breakthrough and exceptional scientific and professional achievements. Recognition of the importance of research still varies among individual researchers and faculties, with significant discrepancies indicating untapped potential. Evaluations also emphasize that maintaining competitiveness will require additional investments in research infrastructure and greater efforts to promote and popularize scientific research work within the broader society.

Findings further suggest the need for innovative approaches to involve a wider circle of students – who are increasingly disengaged – in university governance and in developing a comprehensive lifelong learning offering, which the University of Maribor is addressing through the development of a micro-credential system. Finally, opportunities for improvement also appear in two areas highlighted as priorities by virtually all EU higher education policies and guidelines – digitalization and internationalization. While the University of Maribor began digitalizing its activities and operations in 2023 through projects under the Recovery and Resilience Plan (RRP), a national reform and investment programme for the green and digital transition aimed at creating a more sustainable, resilient, and future-ready society, internationalization, particularly in terms of international recruitment and offering study programmes oriented toward the global environment, also depends on national policies and legal frameworks. Although the Republic of Slovenia is committed in its strategic higher education documents to opening up to the international space, the legal frameworks remain quite rigid and do not allow universities to fully develop their potential. On this topic, the Rector of the University of Maribor, Zdravko Kačič, stated in the newspaper *Večer* that “universities have lost a decade because they were unable to develop study programmes in foreign languages, which would have allowed them to participate equally in European integration processes” (Žišt, 2024).

3.2 Challenges of Global Competitiveness and Regional Shifts

Not only the University of Maribor and its local environment, but also the broader European higher education and research space has recently been facing increasing challenges in terms of competitiveness. Europe is falling further behind other regions of the world in technological development and innovation, which is becoming particularly evident in the field of new technologies. An analysis of data from the Academic Ranking of World Universities (ARWU) and others, such as U.S. News & World Report, shows that Europe remains a leader only in certain areas, such as ecology, geography, and administration. Since 2017, almost all key fields of engineering and technology have shifted to China, which is now the global leader in this area, while the United States still dominates most other scientific disciplines. Other countries and regions play no significant role in the global academic and research space (Marhl et al., 2025).

Although this study has only recently been published, the data have already been used for a normalized analysis comparing results based on countries' GDP and population size (Prathap, 2025). The results are both encouraging and concerning. On the positive side, some European countries still rank high when normalized by the ratio of invested resources and the share of highly educated population, confirming that much can be achieved with relatively modest resources. However, this is not a sustainable long-term advantage, as similar standards, if applied in China, India, or other countries with large (currently underutilized or at least not comparable to European) potentials, could lead to an even greater redistribution of global scientific and academic power.

This is particularly important for the University of Maribor, which achieves high productivity with relatively modest investments but will face the challenge of maintaining competitiveness in the future. Although the University of Maribor continuously advances and improves its research and pedagogical excellence, global competition is becoming increasingly fierce. Many universities, especially in rapidly developing academic and research environments, are growing even faster, investing more resources, and achieving better results. This means that the University of Maribor is slipping downward on some rankings – not because it is performing worse, but because other institutions are advancing even faster. These shifts, which clearly reflect the intensity of global academic competitiveness and the importance of strategic investments in quality, innovation, and development, are highlighted in a comprehensive analysis of current conditions on international ranking lists, which examines Slovenia's and the University of Maribor's position by scientific fields (Glavič et al., 2025).

Since global and regional shifts in rankings have been evident for several years, a Working Group for Developing a Policy on Monitoring the University of Maribor's Ranking Results was established in 2020. Its findings showed that globalization of the higher education space has intensified significantly in recent years and that more and more universities worldwide are competing for experts, students, and financial resources. The working group examined four well-known rankings (*Times Higher Education World University Rankings (THE Rankings)*, *Webometrics*, *QS World University Rankings*, and *ARWU*) and concluded that the final score and ranking of a university are most heavily influenced by scientific research performance (while teaching quality is second), which is one reason universities strive for the best possible

scientific research results and pay special attention to the impact of their scientific publications.

The report also highlighted that the number of scientific publications worldwide doubles every nine years (Van Noorden, 2014), meaning that for the University of Maribor to rise in the studied rankings, it is not enough to gradually increase publications and citations – the growth must occur faster than at competing institutions. Rapidly rising trends are particularly evident in Eastern regions, especially China.

In addition to the quantity of articles and citations, the quality of contributions must also be emphasized. The working group concluded that publications, their quality, and impact are a dynamic process that constantly changes, and to remain comparable with the best universities in the world, we must keep pace with this development. They stressed that this is not only about ranking positions but also about the fact that societal changes and regional shifts are happening increasingly quickly, forcing science to adapt (Poročilo delovne skupine za pripravo politike spremljanja rezultatov razvrščanja Univerze v Mariboru, 2021).

3.3 Future Directions

Based on these studies, it is evident that many European systems, including the education and research sectors, are failing to achieve the necessary flexibility and responsiveness to global trends. In this context, the University of Maribor must direct its development toward strategic sustainability goals that focus not merely on expansion but primarily on improving the quality of education, research, and engagement with industry and society. Instead of quantity, the key orientation should be toward excellence – smaller study groups, individualized approaches, and the development of top potential while maintaining diversity and the university's integrity. The competitiveness of the University of Maribor in the European and global space will depend on systematically promoting breakthrough research, digitalization, sustainable innovations, and smart technologies that contribute to energy efficiency, sustainable mobility, and the circular economy. At the same time, we must not overlook the security aspect of sustainable development, as a stable and secure environment is the foundation for successful and long-term development of the university and society as a whole.

At the University of Maribor, we recognize that sustainable development is not merely an academic concept but a strategic necessity that includes ensuring security at local, national, and global levels. Security is a key component of the university's stability and competitiveness and of society at large; therefore, quality development at the University of Maribor must be closely linked to security aspects.

The United Nations Sustainable Development Goals (Meško et al., 2024; United Nations, n.d.) – in addition to ending poverty and hunger, ensuring health and well-being, quality education, gender equality, clean water and sanitation, affordable and clean energy, decent work and economic growth, industry, innovation and infrastructure, reducing inequalities, sustainable cities and communities, responsible consumption and production, climate action, life below water, life on land, peace, justice and strong institutions, and partnerships – also emphasize the importance of responding to crime and security threats and establishing fair criminal justice systems. The University of Maribor has actively participated for decades in research on security challenges within national and international projects and contributes to shaping policies in the field of security and crime prevention (e.g., environmental crime and protection, care for minors, urban and rural safety, water-related crime, social inclusion of marginalized groups, peace efforts in post-conflict societies, strengthening formal social control institutions). Research by the Faculty of Criminal Justice and Security, which includes cooperation with European institutions such as the European Union Agency for Law Enforcement Training (CEPOL) and the European Crime Prevention Network (EUCPN), highlights the importance of an interdisciplinary approach to ensuring security in local communities at the national level and within the EU (Meško, 2023). Best practices (Meško et al., 2024) show that key elements of successful security provision include trained professionals, the use of advanced technology, and respect for the rule of law, dignity, and human rights. Through its research and pedagogical activities, the University of Maribor contributes to the continuous development of these areas and strengthens cooperation with stakeholders at national and international levels.

The role of the University of Maribor in ensuring the quality of teaching and research is crucial for the long-term enhancement of security and competitiveness of the university and the broader social environment. Continuous improvement of research quality, development of top-level personnel, and interdisciplinary

collaboration contribute to creating comprehensive solutions for sustainable development and security in the European and global space.

4 The Need for the University of Maribor's Contribution to a Responsible Future for Society

At the University of Maribor, most faculties are successfully adopting and implementing sustainability measures in communication and administration as part of the green transition, as most employees have electronic signatures and parts of administrative procedures can be completed online without printing. In the area of handling discarded furniture and IT equipment, the university is approaching best practices seen at foreign green universities. It is encouraging that both faculty leadership and staff are interested in taking action toward the green transition. However, additional measures are urgently needed in water conservation and reducing energy consumption in buildings, as identified through questionnaire analysis.

4.1 Sustainable Management

Sustainable management includes developing a plan for climate neutrality and applying international recommendations and standards for sustainability reporting, which are essential for ensuring transparency, consistency, and comparability of information on sustainability practices in companies and organizations. Examples of some well-known and frequently used standards and recommendations are presented in Table 1:

Universities worldwide increasingly take a leading role in achieving sustainable development goals, particularly in climate neutrality and reducing carbon footprints. To achieve these goals, they develop comprehensive strategies, action plans, and reports based on international sustainability reporting standards, such as Global Reporting Initiative (GRI) guidelines. They also participate in international initiatives like UI GreenMetric, which evaluates the sustainability orientation of universities and campuses.

Examples of good practice include Wageningen University & Research (WUR), which operates a Green Office, and University of São Paulo (USP), which has advisory boards for areas such as mobility, green spaces, water resources, and environmental ethics. These bodies collect data, propose measures, and monitor progress in sustainability.

Table 1: International recommendations and standards for sustainability reporting

International recommendations and standards for sustainability reporting	Description
Global Reporting Initiative (GRI)	Provides a comprehensive framework for reporting on economic, environmental, and social impacts of organizations (Brightest, n.d.).
Carbon Disclosure Project (CDP)	A non-profit organization that enables companies to disclose their environmental impacts. It collects data on greenhouse gas emissions, water consumption, and forest management, helping organizations transition to sustainable business practices (Brightest, n.d.).
ISO 26000	An international standard offering guidelines for social responsibility in organizations, summarized in seven key areas: human rights, labour practices, environment, fair operating practices, consumer issues, community involvement, and development (ASQ, American Society for Quality, n.d.). It is supported by seven principles/values: accountability, transparency, ethical behaviour, respect for stakeholder interests, rule of law, international norms, and human rights. In this way, responsibility for impacts on society, interdependence and integrity are realized (ISO, 2010).

A study involving University of Maribor members found that 45% have established laboratories, departments, or centres focused on the green transition. All members (100%) include green transition measures in their work plans or strategies. However, 40% lack time-bound goals, reducing effectiveness and commitment to achieving these objectives. Time-bound goals are crucial for accountability, progress monitoring, and achieving tangible results.

Additionally, existing units dealing with the green transition often fail to develop innovative solutions for improving sustainability at the level of the university member or the university as a whole. Effective implementation of the green transition requires fostering innovation, interdisciplinary collaboration, and the engagement of all stakeholders in the sustainability transformation process.

4.2 Energy, Buildings, Waste, and Water Consumption

The use of renewable energy sources is often the first step toward achieving climate neutrality, as demonstrated by numerous global universities. These institutions not only use but often produce energy from renewable sources such as solar and wind power. For example, Wageningen University & Research (Netherlands) and University of California, Davis (USA), as highlighted in the third chapter of Ana Murko's contribution (2024), operate extensive systems for sustainable energy production. Efforts include ensuring new buildings are energy-efficient and implementing measures for older structures, such as maximizing daylight use, natural ventilation and cooling, smart controllers for precise energy monitoring and adjustment, LED lighting, installing efficient windows, green roofs and façades for better insulation. Measures for reducing drinking water consumption, such as reusing greywater or utilizing natural springs, were not observed at the University of Maribor; these are common at institutions like the Czech University of Life Sciences in Prague (2023). Other measures include replacing old toilets and faucets with water-saving fixtures. The University of California even operates its own waste water treatment plant. According to the results of our research, waste reduction is a priority everywhere, including at the University of Maribor, which promotes reduction, reuse, separation, and recycling.

Greater energy self-sufficiency through solar power would require short-term investment but would reduce electricity costs and environmental impact in the long term. Roof space on university buildings could be utilized for solar panels, while green roofs and façades could be implemented elsewhere. In the buildings of six university members (30%), informational signs encouraging climate-friendly behaviour (such as turning off lights and reducing elevator use) have already been installed, although awareness efforts could still be increased. It is positive that eleven university members (55%) already use eco-friendly cleaning products, and nine (45%) use recycled, unbleached toilet paper. At least part of the building has already been renovated at nine university members (45%). Students as well are aware of waste separation bins and see this as a reason to consider the university "green." Interviews revealed students appreciate reduced electricity use, coffee machines allowing reusable cups, and progress in reducing paper consumption through greater use of tablets by both employees and students.

To achieve climate neutrality and sustainable development, universities worldwide implement numerous measures in energy efficiency, waste reduction, and water conservation. These actions not only reduce environmental footprints but also serve as educational tools for students and staff. Universities are implementing various measures for reducing energy use, including:

- motion-sensor lighting in unused spaces,
- maximizing natural light by opening the blinds,
- installing energy-efficient LED lighting,
- optimizing heating and cooling schedules,
- using thermostatic valves and setting temperature limits in individual spaces,
- switching off devices when not in use or using energy-saving modes (e.g., sleeping),
- encouraging shared use of devices and considering energy efficiency in purchases of new equipment,
- regular equipment maintenance, including cleaning or replacing filters in air conditioning and heating systems,
- inspection of buildings with IR cameras to detect temperature points and uncontrolled heat leakage.

In addition to these measures, some universities, such as Wageningen University and Research (WUR), use heat and cold storage systems (ATES), which enable seasonal energy storage and reduce natural gas consumption.

From the perspective of security studies and criminology, numerous activities are also carried out in this area in connection with the United Nations, international research collaboration, and public awareness through the media. The importance of environmental protection is reflected also in the monograph on environmental crime and green criminology, translated into eight languages in addition to English (Eman & Meško, 2014).

4.3 IT Equipment and Other Materials

When reviewing practices at global universities, we identified one of the few systematic measures as the separate collection of electronic waste and batteries at Nottingham Trent University in the United Kingdom. The University of São Paulo

in Brazil stands out with its own laboratory for processing and recycling chemical waste and a special system for collecting and recycling used cooking oil. Several universities actively promote the reuse of old furniture, primarily through donation systems or second-hand stores with used equipment.

A positive trend is also evident among the members of the University of Maribor. In a study (Murko, 2024), respondents reported that 15 members (75%) reuse parts of discarded IT equipment as spare parts, while 12 members (60%) store decommissioned equipment for future internal use. Similar patterns were observed in furniture management. The frequent claim that donating decommissioned equipment is prohibited by law is not entirely accurate, such practices could be regulated through appropriate internal policies.

To ensure effective and sustainable management of discarded IT equipment, furniture, and other materials at universities, a comprehensive approach should include the following measures: instead of routine replacement of IT equipment, establishing programmes for maintenance and upgrading existing devices to extend their usability. Storing usable components from decommissioned equipment for use as spare parts, reducing the need for new purchases. Developing internal policies aligned with current legislation to enable responsible handling of decommissioned equipment. Allowing donation of decommissioned but still usable equipment to various institutions or charitable organizations, contributing to the university's social responsibility. Ensuring electronic and electrical waste is processed in compliance with legislation to prevent illegal trade and reduce environmental harm. Implementing educational programmes for students and staff on proper e-waste management to encourage responsible behaviour. In this context, Andreja Rožnik's (2020) doctoral dissertation is significant, as it addresses situational prevention of illegal trade in electrical and electronic waste. Her study emphasizes preventing the illegal export of e-waste from developed countries to developing nations, where improper dismantling of this waste often occurs, causing negative environmental and health impacts.

4.4 Mobility

Environmentally responsible universities worldwide systematically monitor staff and student mobility and publish this data on their official websites. Such practices were observed at the previously mentioned Dutch and American universities. The purpose of this monitoring is to reduce CO₂ emissions associated with transportation. Measures introduced include remote work and meetings, use of video conferencing to reduce travel needs, installation of electric charging stations for cars and e-bikes, bicycle-sharing systems for students and staff, construction of additional bike lanes and parking spaces for bikes, discounts for public transport tickets and car-sharing apps for employees.

At the University of Maribor, there is currently no unified system for collecting mobility data for students and staff. According to research (Murko, 2024), 16 university members (80%) monitor staff mobility, and 14 members (70%) monitor student mobility as well. It is important to note that mobility can refer to daily commuting as well as travel for study or work purposes.

Encouragingly, 17 members (85%) provide adequate bicycle parking, and 12 members (60%) actively promote the use of bicycles and e-bikes. On the other hand, only three members (15%) conduct more than 20% of activities (such as conferences, meetings, lectures) remotely – either fully or in hybrid form. In interviews, students highlighted the importance of public transport as a key element of environmental responsibility and suggested increasing opportunities for bike-sharing.

To more effectively promote sustainable mobility at the University of Maribor, we propose introducing a bicycle-sharing system for students and staff at all university members, thereby increasing access to environmentally friendly transportation. In addition, restrictions could be introduced on short-distance air travel for official purposes, and the use of video conferencing for meetings and consultations could be further encouraged. Remote work, where the nature of the job allows, could also significantly contribute to reducing traffic and emissions. Finally, organizing a car-sharing system among employees would enable better utilization of vehicles and reduce the number of cars on the roads.

4.5 Food

Examples of exemplary sustainable practices in the field of food at universities include providing sustainably produced food in cafeterias, reducing food waste, and offering plant-based food and beverages that are seasonal and locally sourced. An important element is also the availability of tap water or drinking fountains. Such practices are present, for example, at Wageningen University & Research in the Netherlands and Nottingham Trent University in the United Kingdom (Murko, 2024).

The University of Maribor does not manage cafeterias or restaurants itself and therefore cannot directly influence the food offered there. Nevertheless, it can make a significant contribution by promoting sustainable dietary practices and developing guidelines. Research (Murko, 2024) showed that 17 university members (85%) already ensure the inclusion of locally produced food when organizing events and conferences, while eight members (40%) also provide healthy snacks for students and staff. Students often prepare food themselves for events and strive to avoid using single-use plastic packaging.

In the field of food, the University of Maribor still has opportunities for additional sustainable measures. Offering healthy snacks, such as seasonal and locally grown fruit in common areas, encourages healthy eating habits. Installing vending machines and drinking fountains that allow refilling of personal cups or bottles reduces the use of single-use packaging. Guidelines for sustainable and plant-based diets aimed at external food providers can help reduce the carbon footprint of food. Furthermore, establishing community gardens, such as raised beds on degraded areas near faculties, offers a valuable opportunity to involve students in sustainable food production. Such gardens not only contribute to greater food security but also serve as learning environments for acquiring practical knowledge in local and environmentally friendly food cultivation.

4.6 Students and Education

Research and education on the green transition and climate neutrality are already firmly embedded in the academic and research space at many global universities. For example, RUDN University in Moscow (People's Friendship University of Russia) develops content related to biodiversity, climate change, circular economy, nutrition

and health, artificial intelligence, remediation of agricultural and industrial landscapes, and the preservation of marine and terrestrial environments. In addition to undergraduate and postgraduate programmes focused on sustainable development, numerous additional projects aim to develop models and implement best practices.

At the University of Maribor, interest in green topics is also growing. According to research (Murko, 2024), 15 university members (75%) expressed interest in integrating content related to sustainable development, highlighting themes such as climate change, green innovations, and circular economy. Between 2022 and 2025, the university is implementing 23 pilot projects under the national Recovery and Resilience Plan (RRP), aimed at curriculum renewal, digital transformation, and strengthening sustainability competences. All university members engaged in educational activities have expressed willingness to participate, and 19 members (95%) reported that their leadership is interested or highly motivated to introduce green content. Most interviewed students recognized the presence of these topics in regular or elective courses. Some emphasized that they have gained enough knowledge to contribute to responsible behaviour themselves. They also highlighted the importance of role models among staff and the institution, as well as the need to encourage innovation and creativity.

The University of Maribor actively strives to involve students in sustainability activities and educate them about environmental responsibility. Students participate in pilot projects for the green transition, which promote curriculum renewal and the adoption of sustainability-oriented practices. In addition, the university organizes workshops and extracurricular activities to raise awareness about reducing carbon footprints and adopting eco-friendly habits. To foster innovation, the university awards prizes for student contributions to innovation activities. In cooperation with local companies and organizations, it offers opportunities for internships and research related to sustainable solutions, significantly contributing to students' personal and professional development. Green-themed bachelor's and master's theses are also supported, guiding students toward exploring topics in sustainable development. Furthermore, the university enables the establishment of community gardens where students can grow vegetables and herbs themselves. These gardens contribute to greater food security and serve as learning environments for acquiring practical knowledge about sustainable food production.

4.7 Administration

Based on the findings of Murko's research (2024), it can be concluded that the members of the University of Maribor are already actively engaging in sustainable administrative practices, similar to many leading global universities. At 15 members (75%), environmentally friendly printing settings, such as double-sided printing, have already been introduced, while 14 members (70%) carry out part of their administrative procedures digitally, without printing. At five faculties (25%), most students already use electronic signatures, enabling a transition to paperless operations even for more complex administrative processes. In the spirit of sustainable transformation, additional measures are recommended, such as comprehensive document digitization, expanded use of e-signatures, rationalization of schedules, optimization of ventilation and energy consumption in premises, and awareness-raising about the efficient use of electronic devices. Encouraging the use of digital tools instead of paper notebooks and replacing office supplies with those from sustainable sources is also advisable. Digital educational infrastructure plays an important role, enabling the use of online classrooms, uploading materials, conducting assessments, and communication within the learning process. Furthermore, university faculties already incorporate environmental elements into public procurement and promote cooperation with local organizations and external stakeholders to reduce energy and water consumption – similar to practices at the Czech University of Life Sciences Prague.

Leading global universities, such as Nottingham Trent University, University of California, Davis, and the Prague University of Life Sciences, publish annual sustainability reports on their official websites. These reports include a sustainability strategy (goals) set for a multi-year period, an overview of progress across various areas (knowledge and education, research, campus/university operations), expressed in comparison with previous years, presented numerically and often graphically.

4.8 Looking Ahead

We analysed the current state of the green transition and carbon footprint reduction at the university members and proposed a set of sustainability measures in various areas, such as energy and water consumption, waste management, education, and

administration. Now we ask ourselves where are the limits of change, and what are the real challenges in achieving progress in sustainability.

The University of Maribor is already implementing numerous sustainability initiatives, including 23 pilot projects for a green and resilient transition to Society 5.0, which are part of the national Recovery and Resilience Plan (RRP). These projects focus on curriculum renewal, digital transformation, and strengthening students' sustainability competences. To further strengthen sustainable development, the University could consider the following measures: establishing a Green Office, a central unit that would coordinate sustainability initiatives, monitor progress, and promote collaboration among faculties. It would also be reasonable to expand renewable energy sources by installing additional solar panels on university buildings' rooftops to increase energy self-sufficiency. Promoting sustainable mobility is becoming increasingly important, and the introduction of a bicycle-sharing system for students and staff, along with the promotion of public transport, is already functioning in Maribor. Sustainable food practices are still insufficiently represented, and it would be necessary to introduce locally produced food in cafeterias and encourage plant-based diets. Education and awareness-raising in the direction of sustainability are already underway, including organizing workshops and seminars on sustainable practices and integrating these topics into curricula. Green student initiatives are welcome, as is support for student projects focused on sustainable solutions and the introduction of awards for innovative ideas. Cooperation with the local community could be stronger, although partnerships with local businesses and organizations for joint sustainability projects are already partially in place.

Achieving sustainable living goals requires continued collaboration among all stakeholders, including university leadership, staff, students, and the local community. The University must develop comprehensive strategies and action plans that encompass all aspects of sustainable living, including clear timelines. It is also important to integrate sustainability practices into study programmes and research activities so that students acquire the knowledge and skills needed to address environmental challenges in academic, professional, and everyday contexts.

4.9 Working Group for a Green Future

At the University of Maribor, we have been striving for sustainable operations across all areas of our work for decades. In 2010, Peter Glavič once again proposed the development of a project for a sustainable and socially responsible university (TDOU). The initiative was supported in 2012 by seven distinguished professors, including the then Rector of the University of Maribor, Danijel Rebolj (Glavič et al., 2022). A concrete programme on how to become an “Out of the Box” university was approved in 2013 (Rebolj et al., 2013). The Council and the Committee for TDOU began operating. The University of Maribor amended its statute to define the university as a sustainable and socially responsible institution. The governing bodies of the University of Maribor approved the TDOU strategy and policy, the activity plan until 2020, and set TDOU priorities for preparing the university’s work programmes. The TDOU Committee ceased operations in 2019.

At the end of 2021, Rector Zdravko Kačič established a working group for a carbon-neutral university. At its first meeting, the group proposed renaming it to the Working Group for a Green Future. Its goal is to achieve better environmental efficiency, greater public awareness, reduced operating costs for university members, and improved well-being of staff and students. Until now, “green” activities have mainly resulted from the efforts of individual faculties, so achievements have been fragmented and not recorded at the university level. It has become clear that comprehensive sustainable operations require monitoring the implementation of planned goals. Continuous communication and so-called green education are also essential to encourage staff and students to adopt new values. Excessive consumerism, high consumption of natural resources, unnecessary energy losses in buildings, and unsustainable mobility patterns are opportunities that can be quickly integrated into a changed way of operating at the University of Maribor.

Experiences from abroad show that transitioning to a green university requires focusing on three main aspects. The first is orienting education and curricula toward social responsibility and, consequently, toward environmental protection, sustainability, and the use of clean energy. The second point relates to the practical applicability of content and approaches to study, ensuring that students acquire knowledge useful in various everyday situations, both at the university and in society. Education plays a decisive role in the development of society and the preservation

of humankind. The third point focuses on the idea that through our behaviour, we can all positively influence nature and the environment.

A green university refers to institutions capable of meeting the requirements of sustainable operations. These are environmentally friendly universities that ensure campuses remain clean and maintain environmental standards and a “green identity” by achieving environmental sustainability, reducing energy consumption, supporting education and environmental research, using waste recycling systems (reuse of raw materials), offering bike and car-sharing, and providing access to food produced in an environmentally responsible manner. Such universities invest heavily in raising public awareness of environmental issues.

The term “green university” also describes the work universities do to promote sustainable activities that reduce unacceptable environmental impacts on universities and local communities. Higher education institutions are also greening curricula by introducing new study programmes and expanding e-learning. E-learning reduces the need for infrastructure (number of classrooms, student dormitories, libraries, laboratories) and activities associated with traditional pedagogical processes. Energy consumption is lower because students and staff do not need to travel to faculties.

Slovenia does not yet have a modern green university, which is why the University of Maribor decided to record activities and processes already implemented at its members and identify which processes still need to be introduced into university operations. For this purpose, a pilot project – a master’s thesis titled Green University Maribor – is being developed, which will present international criteria for green universities. Using a multi-method approach, we will obtain an overview of the University of Maribor’s compliance with green university criteria and its carbon footprint, revealing additional opportunities for environmentally friendly and sustainable operations.

Below are measures and activities already implemented by some members of the University of Maribor to achieve a green university, which can serve as a basis for improving green practices across all members.

4.10 The Need for Transition to New Values and Performance Indicators

For real progress in sustainability, strategies must include clear goals based on ISO 26000 and related EU directives and guidelines; therefore, it is essential to adhere to sustainability values. This includes areas such as carbon neutrality, meaning the implementation of measures to reduce greenhouse gas emissions and the transition to renewable energy sources. Social inclusion is also important, with special support for students from vulnerable groups, promoting equality and accessibility of education. Environmental responsibility means sustainable management of facilities, waste reduction, and the use of environmentally friendly materials.

Performance indicators must reflect sustainable and socially responsible objectives, such as environmental indicators for measuring carbon footprint, energy efficiency, and reduction of natural resource consumption, as well as social indicators for measuring the share of students and research contributing to sustainable solutions and community engagement. Research quality includes monitoring the impact of research projects on sustainability and improving quality of life. It is crucial to introduce sustainable practices into everyday operations. The University can act as a model of responsible resource management. This includes promoting sustainable mobility (use of bicycles, public transport, car-sharing), introducing green and energy-efficient buildings, and reducing energy and water consumption. Digitalization of processes to reduce paper use and administrative costs is already well established.

An important goal of the University of Maribor is to educate innovative, socially responsible, and therefore sustainability-oriented generations. Students are a key driver of societal change. The University should integrate sustainability content into all study programmes, regardless of the field of study, which is supported by RRP projects. The University of Maribor should encourage interdisciplinary collaboration, connecting natural sciences, technical disciplines, and social sciences to address global challenges. Students emphasize the importance of practical projects where they collaborate with the local community on sustainability initiatives.

The University should act as a connector in sustainability between researchers, industry, policymakers, and civil society at all levels – from local, supporting projects such as renewable energy and water conservation, to international, through

participation in networks of universities for sustainable exchange of practices. An important role of the University of Maribor is also public engagement through organizing events and lectures to raise awareness among the wider public about the importance of sustainability values.

5 The Future of the University of Maribor as a Co-Creator of Sustainability, Security, and Competitiveness

In the future, the University of Maribor aims to strengthen its role in shaping an innovative, socially responsible, and therefore sustainable and secure society that will be competitive in the European and global space. This requires integrating the concepts of sustainable development with strategies for ensuring security and stability in social, economic, and ecosystem contexts.

In line with the United Nations Sustainable Development Goals (Meško et al., 2024), the academic environment must actively contribute to developing knowledge that enables a stable and secure society. The implementation of these goals is also monitored by the Statistical Office of the Republic of Slovenia (Statistični urad Republike Slovenije, n.d.). This includes developing fair institutions, effective responses to security threats, and designing policies for social and economic stability while considering environmental protection for future generations. The University of Maribor, through its research and educational activities, contributes to achieving these goals via interdisciplinary projects that connect science, industry, and the broader social community.

5.1 The University of Maribor's Connection with International Initiatives for Sustainable Action and Security

The University of Maribor is active in numerous initiatives of the United Nations (UN), the Council of Europe (Meško, 2003), and the European Commission that promote knowledge-based policies and practices. Since 2010, the Faculty of Criminal Justice and Security has been a member of the United Nations Academic Impact (UNAI) and regularly reports on its activities related to preventing organized crime, corruption, and ecological threats. Participation in UN sessions and in drafting policy documents confirms the University of Maribor's integration into global sustainability strategies.

The Council of Europe and the European Commission have implemented UN principles into European policies, with researchers from the University of Maribor actively contributing to the development of guidelines in the areas of peace, justice, and strong institutions (Meško et al., 2024). Particularly emphasized are programmes and research focusing on ensuring adequate quality of life, preventive activities for responding to law violations, security threats, and fair criminal justice systems (Eman & Meško, 2014; Meško et al., 2024), through which the University of Maribor contributes to shaping stable and secure social structures.

5.2 Connecting the Research and Educational Environment to Strengthen Security and Competitiveness

Researchers at the University of Maribor have been studying key security challenges at the national, European, and international levels for more than two decades. Their findings have influenced the development of institutions and practices, as evidenced by numerous publications addressing ecological criminology, policing, domestic violence, cybercrime, rural security, and other current topics (Bernik, 2014; Bowden & Meško, 2025; Eman & Meško, 2014; Meško, 2018, 2023; Meško et al., 2011; Meško et al., 2018; Meško et al., 2024). The importance of the academic environment in shaping security policies is also reflected in participation in projects funded by the Slovenian Research and Innovation Agency (ARIS) and various ministries, as well as in the development of national and European strategies. A key factor in connecting academia, politics, and local communities are national conferences on security in local communities. Since 2015, the University of Maribor has organized ten such conferences. An important fact is that the topics discussed at these conferences have become a permanent part of national crime prevention and suppression policies.

Special emphasis is placed on transferring knowledge from academia to the broader social environment. The University of Maribor participates in discussions in the National Assembly, in European working groups (CEPOL, EUROPOL, EUCPN), and in projects supporting crime prevention, environmental protection, and strengthening digital security. Membership of researchers in international professional associations such as the European Society of Criminology (ESC), the American Society of Criminology (ASC), and the Academy of Criminal Justice Sciences (ACJS) enables the University of Maribor to be included in global research flows and to develop comparative studies that contribute to the creation of high-quality policies in all areas of security (Meško, 2023; Meško et al., 2024).

5.3 The Role of the University of Maribor in Shaping a Future Competitive and Secure Society

For the future of the University of Maribor, a key task remains ensuring the quality of teaching and research, thereby strengthening its competitiveness and contributing to the stability of the broader social community. Continuous linking of research with the practical needs of society enables the development of evidence-based policies and the training of professionals capable of addressing increasingly frequent and complex security challenges that transcend national borders (Meško, 2023; Meško et al., 2024).

Science and education are the foundation of sustainable development, which means that the University of Maribor must continue to invest in research, international collaboration, and strengthening cooperation with industry and state institutions. This includes developing new study programmes that address current security and social challenges and promoting an interdisciplinary approach to solving complex problems.

Through its work, the University of Maribor demonstrates that sustainable development is not possible without research, scientific excellence, and quality collaboration with stakeholders at local, national, and international levels. Strengthening the university's role as a co-creator of a secure and competitive society will therefore remain one of its key priorities in the coming years.

6 Conclusion

The University of Maribor recognizes that quality and sustainable development are not separate concepts but interwoven processes that form the foundation for the long-term competitiveness and stability of the higher education space. The analysis of the current state of quality and sustainability aspects of the university shows that the University of Maribor has systematically upgraded quality assurance mechanisms across all areas of its operations over the past decades. These efforts are reflected in numerous reforms, institutional adjustments, and strategic orientations, ranging from internal evaluations to international accreditations and active engagement with the broader social and economic environment.

The key finding of the research is that there is no sustainable development without high quality. Sustainable development is not merely an environmental concept but a broader strategic approach that includes economic, social, and security dimensions and is based on high-quality research, innovation, and education. Only through continuous improvement of teaching, research, and management quality can the university create new knowledge, technologies, and behavioural patterns that will reduce the burden on the natural environment while maintaining and raising the level of development and quality of life, as well as the high standard of society.

The European higher education space today faces challenges of global competitiveness, with data showing that Europe's technological development and innovation potential lag behind other regions of the world in some segments. The University of Maribor must therefore focus even more on strengthening research excellence, interdisciplinarity, and integration into international research flows. This requires a shift from quantity to high-quality research and publications and systematic promotion of breakthrough research potential, especially those that impact sustainable development and the quality of life for people, society, work, and the natural environment.

Mechanisms of digitalization play a special role in ensuring quality and sustainable development, as they enable process optimization, increase efficiency, and contribute to sustainable practices. The digital transformation of the University of Maribor is therefore one of its key strategic priorities, as it not only enhances the university's performance but also reduces administrative burdens, improves access to knowledge, and strengthens connections with global trends in education and research.

Collaboration with industry and the broader social environment remains crucial for the sustainable future of the University of Maribor. Strengthening cooperation in areas such as the circular economy, smart technologies, energy efficiency, and sustainable mobility will enable better knowledge exchange and faster transfer of research results into practice. At the same time, it has become evident that the university must take an even more active role in shaping security strategies, as a stable and secure environment is the foundation for long-term competitiveness and social well-being.

Based on these findings, the following strategic directions are outlined for the future of the University of Maribor: emphasis on the quality of the educational process with smaller study groups and individualized approaches; systematic identification and development of breakthrough research potential; alignment of research with European and global sustainability orientations; accelerated digitalization and strengthening of digital security; and enhanced cooperation with economic and social stakeholders.

The University of Maribor remains firmly committed to a holistic understanding of sustainable development as a process that cannot be achieved without quality and continuous progress. Through ongoing improvements, systematic evaluation, and adaptation to global trends, the university can strengthen its role as a central actor in the sustainable development of society and contribute to shaping a secure and competitive future.

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CHALLENGES OF THE UNIVERSITY OF MARIBOR IN THE AREAS OF EUROPEAN INTEGRATION, MICRO-CREDENTIALS, DIGITALISATION AND THE GREEN TRANSITION

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The third decade of the Bologna Process will be largely focused on the institutionalisation of the Common European Higher Education Area (EHEA). With the adopted University of Maribor Strategy 2021–2030, the university follows the most important guidelines of the Bologna Process. As a partner of the European Alliance ATHENA, it actively participates in the shaping of the EHEA. At the university, as part of the implementation of the Recovery and Resilience Plan (RRP) pilots, we are developing numerous pilot short courses. In the field of green transition, the university is successfully implementing 23 RRP pilot projects to ensure sustainable operations. The university is ahead of a building infrastructure investment cycle, which will involve twelve faculties over the next five years. The university is aware of the challenges posed by the development of artificial intelligence tools. Through its research work, it acts as a developer of artificial intelligence tools, while at the same time developing a culture of responsible use of artificial intelligence. By developing and implementing the INNOVUM platform, the university aims in the field of knowledge transfer to make a significant contribution to building the foundations for the development and innovation breakthrough of the Eastern Slovenia Cohesion Region.

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1 Universities as the Foundation of Society's Development Efforts at National and Global Levels

1.1 The Common European Higher Education and Research Area as the Key to Long-Term Successful Development of Europe's Economic and Social Space

With the accelerated process of globalization over the past 30 years and the rapid development achieved during this period, particularly by Asian countries, conditions in an increasingly globalized world have changed, along with the competitiveness of individual regions. The European Union, with its 27 member states and 448 million inhabitants, faces significant challenges in maintaining global economic competitiveness and its leading role in the world due to fragmentation, untapped potential, and the resulting lack of synergistic effects. In recent years, Europe's lag has become increasingly evident in several key technology areas, such as semiconductor technologies, quantum computing, artificial intelligence, photovoltaics, digital infrastructure, and cybersecurity, as well as in innovation and commercialization of innovations. Many of these technologies require adequate financial, infrastructural, material, and human resources for their development – resources that, due to fragmentation and often partial interests, individual member states have not been able to provide in the past, despite certain joint efforts, and consequently have not prevented falling behind in these areas. European policy has long recognized the challenges of maintaining global competitiveness and the need to pool development potential, especially in research and higher education. It seeks to achieve this by developing the European Research Area (ERA) and the European Higher Education Area (EHEA).

1.2 The Bologna Process as the Fundamental Building Block of the Common European Higher Education Area

The accelerated development of the common European Higher Education Area began with the signing of the Bologna Declaration in 1999 by ministers responsible for higher education from 29 European countries (European Higher Education Area [EHEA], 1999). The main goal of the Bologna Process was to establish a common European Higher Education Area. This area was officially launched in March 2010 during the ministerial conference in Budapest and Vienna, marking the 10th

anniversary of the Bologna Process. The key objectives of the Bologna Process at the time of signing the Bologna Declaration were related to harmonizing higher education systems in the signatory countries, introducing a three-cycle study structure, developing the European Credit Transfer and Accumulation System (ECTS), promoting mobility, ensuring quality and standards, and promoting the European dimension in higher education.

The first decade of the Bologna Process was a decade of transforming the European Higher Education Area in line with the guidelines for establishing the three-cycle study system. In the second decade, through activities such as student and staff exchanges under the Erasmus programme, the process of building trust among European higher education institutions began, primarily through mutual recognition of students' academic achievements completed at individual institutions during exchanges, the inclusion of visiting professors in the pedagogical process, and the implementation of joint study programmes. Through these activities, European higher education institutions acknowledged the equivalence and comparability of quality within the European Higher Education Area, paving the way for further development of the common area. Through periodic ministerial conferences (every two or three years) ministers responsible for higher education of the signatory countries of the Bologna Declaration have shaped government commitments to enable further steps in developing the common European Higher Education Area.

The third decade of the Bologna Process, as the decade of institutionalizing the common European Higher Education Area at the European level, is largely framed by the decisions of ministerial conferences in Paris (2018) (EHEA, 2018), Rome (2020) (EHEA, 2020a), and Tirana (2024) (EHEA, 2024). Ministerial communiqués and annexes adopted at these conferences provide further guidelines for the development of the common European Higher Education Area until 2030. Special emphasis is placed on strengthening the fundamental values of the common European Higher Education Area, such as academic freedom, integrity, and democratic governance of higher education institutions.

According to the established guidelines, by 2030 the European Higher Education Area will represent a space where students, staff, and graduates can move freely to study, teach, and conduct research. It will fully respect the fundamental values of higher education, democracy, and the rule of law, promote creativity, critical

thinking, free flow of knowledge, and expand opportunities offered by technological development for research-based and student-centred learning and teaching. It will be an inclusive, innovative, and interconnected European Higher Education Area.

The adopted communiqués recognize the potential of higher education institutions to foster significant social change (through improving knowledge, skills, and competences of students and society) and to contribute to sustainability, environmental protection, and other key goals. They also reaffirm the commitment of higher education institutions to motivate and guide students toward becoming active, critical, and responsible citizens, offering opportunities for lifelong learning and supporting them sustainably in their social roles.

European higher education is called upon to strengthen its role as a key actor in achieving the United Nations Sustainable Development Goals (SDGs) by 2030 (Spremenimo svet..., n.d.). Through its educational, research, and innovation capacities, it must significantly influence fundamental global objectives and contribute to achieving sustainable development goals.

At the last three ministerial conferences, ministers reaffirmed the importance of three key commitments of the Bologna Declaration, which are prerequisites for successful development and innovation in the European Higher Education Area. These are: the introduction of a three-cycle system of study programmes and degrees based on learning outcomes and the European Credit Transfer and Accumulation System (ECTS), compatible with the overarching qualifications framework of the European Higher Education Area (QF-EHEA), supporting the recognition of qualifications throughout the European Higher Education Area by implementing the Lisbon Recognition Convention and its principles, promoting a culture of quality in higher education through appropriate quality assurance procedures in line with the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG), adopted in 2005 by ministers responsible for higher education, based on a proposal prepared by the European Association for Quality Assurance in Higher Education (ENQA) in cooperation with the European Students' Union (ESU), the European Association of Institutions in Higher Education (EURASHE), and the European University Association (EUA). In 2015, a revised document of the Standards and Guidelines was approved (Evropsko združenje za zagotavljanje kakovosti, 2015).

The communiqués also include commitments to support, promote, and safeguard the values of academic integrity, institutional autonomy, student and staff participation in higher education governance, and public responsibility for higher education. These values are to be reflected in national legislation and implemented in practice.

Ministers also confirmed the importance of establishing an inclusive European Higher Education Area by 2030, capable of supporting a cohesive, sustainable, and peaceful Europe, where students at all stages of their learning journey are fully supported by policies ensuring access to and completion of higher education, regardless of their background or circumstances. They expressed support for higher education institutions in strengthening their contribution to society and local communities and committed to responding to sustainability goals (SDGs) and supporting a combination of face-to-face and online learning and teaching. A commitment was also made to ensure synergy with the European Education Area (EEA) and the European Research Area (ERA).

Based on the principles and guidelines for strengthening the social dimension of higher education in the European Higher Education Area (EHEA, 2020b), outlined in the Rome Communiqué of 2020, the conference in Tirana approved the document Indicators and Descriptors for the Principles of the Social Dimension of Higher Education in the European Higher Education Area (Bologna Follow-up Group, 2024) as the first comprehensive and consolidated framework for the social dimension in the European Higher Education Area. An important decision was also adopted to promote the improvement of data collection quality through participation in related initiatives such as Eurostudent. Directions were confirmed to support activities in the areas of the green and digital transition and lifelong learning, within which micro-credentials were identified as a new form of educational provision.

The impact of Artificial Intelligence (AI) on our society and economy, as well as on learning, teaching, assessment, and research, was recognized. The use of AI technology will require adaptation of existing practices and the development of new practices and policies at both institutional and systemic levels, while appropriately considering opportunities, risks, and challenges. Particular emphasis was placed on the ethical dimension in the development and implementation of AI and on

supporting ethical, trustworthy, responsible, and rights-based use of AI in learning, teaching, and research practice, with the aim of ensuring transparency, fairness, collaboration, and the well-being of students and staff.

In the field of student mobility, the promotion of physical mobility was identified as an important activity, with the goal of achieving at least 20% mobile students. To achieve this goal, it is essential to ensure secure data exchange in strengthening the recognition of acquired knowledge and skills, quality assurance, and mobility, as well as establishing interoperability standards that will facilitate easier student access to mobility opportunities and support services, such as the European Student Card initiative and the digital solution “Erasmus Without Paper”.

For further strengthening of the European Higher Education Area, it is necessary to achieve deeper integration and institutionalization of transnational cooperation, supported by the Erasmus+ programme, reinforced by Bologna tools and commitments, and by ensuring their implementation. It was recognized that initiatives at various levels, including European University Alliances, create new opportunities for academic communities and must involve student and staff participation in all decision-making processes. In this process, the European Commission’s communication on the plan for a European degree (European Commission, 2024) is also significant.

1.3 Strategy of the European University Association (EUA) “Universities without Walls: A Vision for 2030”

The strategy of the European University Association is an important document that largely sets the framework for the future development of universities in the European area and for strengthening their role in modern society.

The European University Association (EUA) published the document “Universities without Walls: A Vision for 2030” in 2021 (EUA, European University Association, 2021). This provides a comprehensive framework for the future development of universities in Europe. It emphasizes openness, sustainability, inclusiveness, and the need for strong, autonomous, and responsible institutions that will effectively serve society in the coming decade.

The vision defines the direction of university development up to 2030, enabling universities to address challenges in a rapidly changing world, such as the climate crisis, technological progress, geopolitical tensions, and growing inequality. It identifies key aspects of further development of universities, including openness, transformative capacity, and transnationality – universities must be open and connected to society, acting as physical and virtual spaces for collaboration and knowledge exchange. They should promote innovation in education, research, and engagement with the wider community. They must strengthen transnational cooperation that transcends borders, thereby enhancing learning, research, and the fulfilment of universities' missions. Universities should ensure sustainability, diversity, and engagement. Sustainability must be a fundamental principle influencing campus life, education, research, innovation, external activities, and internationalization. They should embrace diversity in all its forms and guarantee inclusion for all students, academic staff, and researchers, actively engage with their communities, and address societal challenges. Universities must be strong, autonomous, and responsible, with strong leadership and sufficient autonomy to effectively fulfil their mission. They should be accountable to society and uphold academic freedom and ethical standards in their operations.

The strategy “Universities without Walls” is not a blueprint for European policies but serves as a basis for dialogue and action within the European higher education area, primarily at national levels. This includes, among other things, reforming academic careers to recognize a broader spectrum of contributions and promote interdisciplinarity, strengthening civic engagement and the role of universities in addressing societal challenges, and fostering interoperability of learning opportunities among European higher education institutions.

The European Strategy for Universities, published by the European Commission in January 2022 (European Commission, n.d.), aligns with the EUA vision. The aim of the published strategy is to strengthen links between education, research, and innovation while building on the European Higher Education and Research Area. The published European strategy also highlights the importance of the principles described in the “Universities without Walls” strategy.

1.4 European University Alliances

The third decade of the Bologna Process will, in line with the guidelines of the ministerial conferences in Rome and Tirana and the European Universities Initiative (European Commission, Directorate-General for Education, Youth, Sport and Culture, n.d.), be largely focused on institutionalizing the European Higher Education Area at the European level through the operation of European university alliances. The goal is to establish federations of European universities in the first phase and the institution of a “European University” by 2030. Elements of this process also include the European degree, the European Student Card, and the implementation of the “Paperless Erasmus” project.

The European Universities Initiative, launched in 2019 as part of the broader Erasmus+ framework, formalized efforts to create sustainable transnational alliances (European Commission, Directorate-General for Education, Youth, Sport and Culture, n.d.). The initiative supports efforts to achieve key objectives, such as: establishing transnational university alliances that can collaborate on common educational goals and strengthen institutional cooperation, promoting European integration in higher education (strengthening the identity of European higher education and fostering a more connected European Education Area), cultural exchange (encouraging cultural understanding and exchange among students and staff from different European countries), strengthening European identity (fostering a sense of European identity and citizenship through educational experiences and shared values), improving quality and competitiveness (enhancing the quality and attractiveness of European higher education institutions globally and ensuring their competitiveness), promoting student mobility (increasing mobility of students and staff among participating institutions and attracting talent from outside the European Higher Education Area), developing joint study programmes (encouraging the development and recognition of joint programmes, enabling students to gain experience and qualifications at multiple universities during their studies), fostering research collaboration (pooling research capacities of partner universities to address societal challenges and contribute to knowledge and innovation), developing and implementing lifelong learning (raising awareness of lifelong learning and skills development to make education more adaptable to labour market needs), inclusion and accessibility (developing inclusive higher education within the European area) as well as digital transformation (promoting the use of

digital technologies and innovative teaching methods to improve learning experiences).

The European Commission allocates significant funding to support this initiative through programmes such as Erasmus+ and Horizon Europe and is preparing mechanisms for long-term stable financing in the coming years, aiming to establish a competitive, innovative, and digitally supported European Higher Education Area.

As of 2025, there are 65 European university alliances operating in Europe that have received funding from the Erasmus+ programme, one alliance with previous funding and an awarded Seal of Excellence, and seven alliances that have received the Seal of Excellence. In total, more than 640 higher education institutions from all parts of Europe are transforming higher education and significantly strengthening the process of building a common European Higher Education Area.

1.5 National Legislative Framework in Higher Education

The operation of higher education institutions at the national level is governed by two overarching laws – the Higher Education Act and the Scientific Research and Innovation Activities Act – taking into account long-term development strategies in the field of higher education (National Higher Education Programme 2030) and research activities (Research and Innovation Strategy of Slovenia 2021–2030). The first was adopted by the National Assembly in 2025, and the second in 2021.

1.5.1 National Higher Education Programme 2030

The National Higher Education Programme until 2030 (“Resolucija o nacionalnem programu visokega šolstva do 2030 (ReNPVŠ30)”, 2022) represents a strategic framework for the development of Slovenian higher education in the coming decade, aiming to create an accessible, high-quality, responsive, and internationally comparable higher education system that will contribute to a knowledge-based society.

The key strategic objectives of the programme are: improving quality, increasing responsiveness, flexibility, and attractiveness, strengthening international integration, increasing research and innovation intensity, enabling lifelong learning opportunities, and improving knowledge transfer to the environment.

The programme stipulates that achieving these strategic objectives will be possible through planned activities in the following areas: ensuring quality and excellence (raising the level and quality of higher education in Slovenia, promoting excellence in teaching and research, developing and updating study programmes according to societal and labour market needs, and ensuring quality education and student support), increasing responsiveness and flexibility (adapting the higher education system to the needs of the economy, non-economic sectors, and society as a whole, promoting interdisciplinarity and cooperation with other sectors, developing flexible forms of study and lifelong learning, considering and co-shaping digital transformation in education, research, and innovation), strengthening international integration (increasing the openness of higher education institutions to the international community, promoting mobility of students, teachers, and researchers, integrating into the European Higher Education Area and European university alliances, developing joint study programmes and cooperation with international institutions, adapting legislation to attract foreign experts and students), improving accessibility and inclusiveness (ensuring broad access to higher education for all, promoting social and regional inclusion in the academic process, developing support mechanisms for students from diverse backgrounds, enabling free study in all three cycles), increasing research and innovation intensity and knowledge transfer (promoting scientific research and artistic activities, strengthening links between research institutions and the economy, improving knowledge and innovation transfer to society), ensuring appropriate conditions for the operation of higher education institutions (amending legislation for a flexible and responsive higher education system, ensuring sufficient public funding, strengthening autonomy and accountability of higher education institutions, promoting high standards of academic culture and ethics).

1.5.2 Research and Innovation Strategy of Slovenia 2021–2030

The key focus of the Resolution on the Scientific Research and Innovation Strategy of Slovenia 2030 (“Raziskovalna in inovacijska strategija Slovenije 2021–2030 (ReZrIS30)”, 2022) is the transformation of Slovenia into an innovative, sustainable, and competitive knowledge-based society. The strategy provides a strategic framework that will guide public policies and investments in research, development, and innovation in Slovenia over the next decade, aiming to achieve ambitious development objectives and strengthen Slovenia’s position as an innovative country.

The strategy addresses key aspects of science and innovation development and focuses on setting objectives and implementing appropriate measures in the following key areas: advocating for excellent science as a prerequisite and guarantee for ecological, democratic, and socially just societal and economic development, ensuring an attractive research environment with an appropriate awarding system, establishing a system for identifying and developing potential in niche areas that can contribute to the development of society as a whole, shortening the path from scientific findings to societal implementation, guaranteeing freedom of scientific research through the autonomy of research organizations, organizing research work effectively and transparently, nurturing the next generation of top scientists, ensuring access to world-class international research infrastructure as well as technological, entrepreneurial-innovation infrastructure and e-infrastructure, and their continuous modernization, strengthening interdisciplinarity in research, ensuring transparent periodic international evaluation of research organizations, proactively introducing principles of open science and open innovation, and promoting polycentric and diversified development of research organizations.

1.5.3 Scientific Research and Innovation Activities Act

The Scientific Research and Innovation Activities Act (ZZrID), adopted in 2021, regulates the provision of public services in the field of research activities, including for higher education institutions (“Zakon o znanstvenoraziskovalni in inovacijski dejavnosti (ZZrID)”, 2021). The Act establishes important foundations for the more successful implementation of the mission of higher education institutions in scientific research, as it largely introduces a new framework for financing, organizing, and conducting scientific research and innovation activities. Its aim is to promote high-quality research and innovation, ensure conditions for achieving excellence, enhance the competitiveness of the economy, contribute to the development of knowledge and scientific potential in the Republic of Slovenia, strengthen international cooperation, and encourage open science and innovation.

The provisions of the Act grant higher education and research institutions greater operational and administrative freedom in planning and implementing research activities, while also setting clear mechanisms for accountability and transparency. In the area of research funding, the Act ensures an increase in public investment in research, development, and innovation, with the goal of achieving a competitive

ratio relative to GDP. It also defines co-financing mechanisms using EU funds and other sources to increase long-term stability and predictability of funding.

The Act pays significant attention to fostering collaboration between research and higher education institutions and the economy, aiming to improve the effectiveness of knowledge transfer into practice and to promote an innovation culture at various levels of society.

Since the Act grants autonomy in research to research institutions, it also defines measures to ensure a quality loop as a basic mechanism for improving the functioning of the research system. This includes systems for regular monitoring, self-evaluation and evaluation, and reporting on the effectiveness of research activities.

The Act emphasizes the importance of education and training of researchers and creating an attractive environment for work in research, as well as the importance of open access to scientific publications and data. Through specific provisions, it encourages the participation of Slovenian research organizations and researchers in international projects and networks.

1.5.4 Higher Education Act

In 2025, the National Assembly of the Republic of Slovenia adopted a new Higher Education Act. The text of the Act clearly recognizes the important role of higher education as one of the key drivers of social development, with the fundamental mission of strengthening and empowering citizens for personal growth, professional careers, and active citizenship, as well as for the spiritual, social, artistic, cultural, and economic development of the community (“Zakon o visokem šolstvu”, 2025). Therefore, higher education plays a central role in creating conditions for the sustainable development of a knowledge-based society and bears responsibility to fulfil its societal mandate, based on the trust expressed through constitutionally guaranteed autonomy, by performing its three core missions: research, education, and social engagement, and by achieving excellence in all three areas to contribute to scientific, economic, social, cultural, and democratic development.

The Higher Education Act (“Zakon o visokem šolstvu”, 2025) and the Scientific Research and Innovation Activities Act (“ZZrID”, 2021) together form the fundamental framework for the provision of public services in higher education. The Higher Education Act introduces key systemic solutions for ensuring long-term stable financing of higher education and defines comprehensive mechanisms for its implementation in the form of lump-sum financing. It sets the dynamics for increasing financial resources to the level of the projected GDP share, redefines the relationship between the basic and development pillars of funding, and introduces a new infrastructure pillar aimed at long-term provision of funds for the development and renewal of infrastructure capacities of higher education institutions. In line with the definition of public service in higher education, the Act redefines the workload of academic staff and specifies the implementation of sabbatical leave. It also broadens the possibilities for the use of foreign languages in higher education; however, due to the restrictions imposed, these possibilities will not allow Slovenian institutions to achieve the same level of internationalization as their counterparts in developed Western European countries. These limitations will hinder the full exploitation of potential for successful integration of Slovenian higher education institutions into European integration processes and their ability to operate even more effectively at the global level – primarily due to restricted opportunities for employing foreign experts, which are essential for internationalization of the Slovenian higher education, with the aim of ensuring brain circulation and talent attraction beyond Europe. The Act also provides a detailed framework for the operation of the National Agency for Quality in Higher Education and the procedure for granting concessions. It legally defines micro-credentials as short educational and training programmes aimed at acquiring specific knowledge, skills, and competences that meet social, personal, cultural, or labour market needs. Furthermore, it introduces provisions for organizing and implementing regular physical activity programmes for students during their studies, with emphasis on the first year of first-cycle study programmes. It also includes detailed provisions on gender equality, as well as prohibitions of sexual and other harassment and bullying.

The new legislative framework established by both Acts largely follows the guidelines of commitments adopted in ministerial conference communiqués and annexes, as well as strategic documents in the field of higher education issued by the European Commission. It represents an important step toward more successful integration of Slovenian higher education institutions into European integration

processes, enabling more equitable participation in European university alliances. However, due to the restrictions on the use of foreign languages in higher education and the resulting limitations on employing a larger number of foreign experts in the educational process, thus preventing a significant increase in research potential, the Act will not allow full exploitation of the internationalization potential of Slovenian higher education. This is crucial for achieving a sufficient number of highly educated professionals in Slovenia in the long term, which, given future demographic trends, is essential for ensuring global competitiveness of Slovenian society in the future as well.

It is also important that both Acts, together with the long-term development strategies (National Higher Education Programme until 2030 and Slovenian Scientific Research and Innovation Strategy 2030), are aligned with the Slovenian Development Strategy 2030 (Šooš et al., 2017) and complement other national strategic documents, such as: Slovenian Industrial Strategy 2021–2030 (Vlada Republike Slovenije, 2021), Slovenian Smart Specialization Strategy (*Slovenska strategija trajnostne pametne specializacije*, 2023), National Energy and Climate Plan (Vlada Republike Slovenije, 2024), National Environmental Protection Programme 2030 (“Resolucija o Nacionalnem programu varstva okolja za obdobje 2020–2030 (ReNPVO20–30)”, 2020), Digital Slovenia 2030 (Vlada Republike Slovenije, 2023), and National Programme to Promote the Development and Use of Artificial Intelligence in the Republic of Slovenia until 2025 (Vlada Republike Slovenije, 2021).

2 University of Maribor Strategy and Operational Challenges in the Next Decade

In 2021, the University of Maribor adopted the University of Maribor Strategy 2021–2030, outlining its development path for the new decade. The goals set are ambitious yet realistic and follow the vision of the university becoming a globally recognized innovation ecosystem where employees and students create with joy. The vision is aligned with the adopted strategic documents for the development of the common European Higher Education Area, as defined by commitments of governments expressed in communiqués adopted at ministerial conferences supporting the implementation of the Bologna Process. It is also consistent with the strategy of the European University Association “Universities without Walls”, the principles of the Magna Charta Universitatum 2020 (Magna Charta, 2020), and follows the guidelines

of the Research and Innovation Strategy of Slovenia 2021–2030 (“Raziskovalna in inovacijska strategija Slovenije 2021–2030 (ReZrIS30)”, 2022) and the National Higher Education Programme 2030 (“ReNPVŠ30”, 2022). The strategy is based on a commitment to creating an inclusive, innovative, and interconnected higher education space that will educate active, critical, and responsible citizens, ensure the quality of education and research, uphold academic integrity, and promote sustainable societal development (Univerza v Mariboru, 2021).

In the field of education, activities focus on creating an inclusive, research-based learning environment, fostering the use of innovative teaching methods and modern learning settings, establishing conditions for a student-centred learning process, and promoting lifelong learning. In the field of scientific and artistic activities, the university commits to research excellence and international comparability within the broader research space. This will be achieved primarily by strengthening creative interdisciplinary research cores in key research areas, ensuring sustainable, socially responsible, and high-quality development of scientific disciplines and research fields and sub-fields, in line with the principles of smart specialization, with an emphasis on addressing societal challenges. Internationalization goals are linked to strengthening the university’s international visibility, developing various forms of education in foreign languages, promoting international mobility of staff and students, and actively co-shaping the European Higher Education Area – particularly through initiatives and activities aimed at establishing a European university and through participation in the ATHENA European University Alliance.

2.1 ATHENA European University Alliance

The University of Maribor is a member of the ATHENA European University Alliance (Athena, 2024), which it also chairs in 2025. ATHENA is an alliance focused on advancing technology through higher education and innovative approaches. The ATHENA alliance consists of 9 universities from EU member states and one university from Ukraine. The EU member universities are: University of Maribor, Slovenia, Hellenic Mediterranean University, Greece, Maria Curie-Skłodowska University, Poland, Polytechnic Institute of Porto, Portugal, University of Orléans, France, University of Salento, Italy, University of Siegen, Germany, University of Vigo, Spain and Vilnius Gediminas Technical University, Lithuania. The Ukrainian member is Igor Sikorsky Kyiv Polytechnic Institute, Kyiv. The

ATHENA alliance brings together 96 faculties, with over 15,000 staff, more than 96,000 students, and 51 associated partners from industry, government, NGOs, and other public institutions.

The key objective of the alliance is to reduce fragmentation in Europe – closing the European gap related to regional socio-economic and technology-driven development – while promoting a transition to smart, sustainable, and inclusive growth, achieving global recognition, and ensuring conditions for successful brain circulation.

A distinctive feature of ATHENA is its integration of arts, social sciences, and humanities with natural and engineering sciences, fostering technological progress that holistically addresses social and environmental challenges. By leveraging interdisciplinarity, ATHENA combines fundamental and applied research and ensures deep engagement with regional communities. Interdisciplinarity and integration of all four missions – education, research, innovation, and social awareness – are mandatory in all activities, cooperation structures, and operational models.

Through the transfer of global knowledge and connections to local environments, the alliance aims to contribute to regional development. Using the complementary expertise of its members, ATHENA addresses three critical challenges: the technological gap between Europe and its global competitors, inequalities among European regions, and the need for a socially responsible, human-centred approach to technological development. ATHENA's thematic priorities are fully aligned with the RIS3 – Research and Innovation Strategies for Smart Specialization.

Medium-term goals of the alliance include developing ATHENA University study programmes, jointly delivered by member institutions, and establishing ATHENA University research cores in specific fields to pool top research capacities and achieve global competitiveness of ATHENA University in scientific research.

The alliance's activities are rooted in a commitment to European values – linguistic and geographic diversity supports its mission to foster shared understanding of European values and culture by embracing diverse identities. Increased mobility and transnational cooperation in all activities will help connect regions that differ

geographically, socially, and culturally, with a strong emphasis on social inclusion, diversity, and equality.

3 Micro-Credentials Will Transform the Approach to Acquiring New Knowledge and Skills

Technological development, the green transition, and economic and demographic changes are reshaping the global labour market, creating a need for lifelong learning and the acquisition of competences required for the future workforce. Higher education is also facing major changes, as traditional education for specific professions no longer provides the necessary resilience of the population to increasingly rapid changes. Competences are coming to the forefront, and higher education is being significantly complemented by lifelong learning. At the heart of these changes are micro-credentials – short educational programmes and training courses that enable the acquisition of specific knowledge, skills, and competences tailored to social, personal and cultural needs as well as labour market demands.

According to the World Economic Forum, 44% of the global workforce will require additional training or reskilling in the next five years, as two-fifths of their existing competences will be transformed or become obsolete between 2025 and 2030 (World Economic Forum, 2025). Data from the OECD (Organisation for Economic Co-operation and Development, 2023) show that currently only 40% of adults in Europe engage in lifelong learning. To address these challenges, the European Union (EU) adopted the Council Recommendation of 16 June 2022 on a European approach to micro-credentials for lifelong learning and employability (“Priporočilo Sveta z dne 16. junija 2022 o evropskem pristopu k mikrodokazilom za vseživljenjsko učenje in zaposljivost”, 2022), which provides the basis for developing flexible learning pathways in Member States, including integration into national qualification systems.

Following the Council Recommendation and within the framework of the Recovery and Resilience Plan, activities to promote lifelong learning and establish a unified micro-credential system in Slovenian higher education began in the second half of 2022. The University of Maribor approved the first version of its Guidelines for the Development of Micro-Credentials in June 2023 (Univerza v Mariboru, n.d.-b), taking a leading role and actively contributing to the preparation of the Guide for

Developing a Micro-Credential System in Slovenian Higher Education (Gergorić, 2024), published by the Ministry of Higher Education, Science and Innovation (MVZI) in cooperation with the National Agency for Quality in Higher Education (NAKVIS).

So far, the members of the University of Maribor have developed numerous pilot short courses under the Recovery and Resilience Plan (RRP), in collaboration with the labour market, to test different approaches to cooperation with the environment. There is strong interest from employers, both in co-designing the content of such educational courses and in training their employees.

Within UM's lifelong learning framework, various short programmes are being prepared, divided into non-accredited short courses without assessment of learning outcomes, non-accredited short courses with assessment of learning outcomes, and accredited short courses with assessment of learning outcomes and issuance of a micro-credential. Certificates for non-accredited short courses are issued by UM members in line with existing lifelong learning practices. For accredited short educational programmes and training courses for obtaining micro-credentials, a detailed process is defined for accreditation, modifications, implementation, issuance of micro-credentials, and evaluation procedures, based on established quality assurance standards in higher education and UM's internal quality management processes.

In developing short educational programmes and training courses for obtaining micro-credentials, we will adhere to the same standards as those applied in designing a course unit within a higher education study programme. Courses will be delivered by qualified higher education teachers with appropriate references in education. Once the legal framework is adopted, short educational programmes and training courses for obtaining micro-credentials co-designed with employers and aligned with labour market needs will be eligible for accreditation. After approval by the faculty senate, proposals will be reviewed by the UM Committee for Education and Study (KIS UM), which includes vice-deans for education, student representatives, and professional staff. The final decision will be made by the UM Senate. All accredited short educational programmes and training courses for obtaining micro-credentials will be published in UM's Lifelong Learning Catalogue. Participants will be registered in the Academic Information Subsystem (AIPS), which will store

records of accredited short educational programmes and training courses, participants, and issued micro-credentials. Participants will receive a UM digital identity, granting access to necessary university infrastructure. UM micro-credentials will be issued exclusively for accredited short educational programmes with verified learning outcomes, based on an approved syllabus. Gathering feedback from all stakeholders will be essential. Evaluation processes will involve learners, higher education teachers and staff, industry experts, and other relevant stakeholders. Quality assurance mechanisms for micro-credentials are crucial for their recognition by both learners and employers.

The University of Maribor sees micro-credentials as an enhancement of its lifelong learning offer and an opportunity to establish an innovative mechanism for long-term cooperation with industry and non-economic sectors. In this process, we strive to involve representatives from the working environment already at the stage of preparing the conceptual design of short educational programmes and training courses for obtaining micro-credentials. Direct involvement of external stakeholders is key to closing gaps regarding competences, fostering innovation, opening new career paths, and increasing the international competitiveness of the economy. Economic development depends on identifying key competences for future labour market needs. This challenging task can only be addressed through collaboration between researchers and employers, enabling faster transfer of research results into practice and creating new high-added-value jobs.

For the development of short educational programmes and training courses for obtaining micro-credentials, the University of Maribor emphasizes the need for a digital platform to connect information on competences acquired through study programmes and short courses with identified labour market and societal needs. As part of the university's Recovery and Resilience pilot project Agile Development of Education and Micro-Credentials, we have therefore undertaken the development of systemic support, the advancement of all forms of education supported by a competence framework, and the creation of a UM classification of competences. The process of accreditation, monitoring development, and ensuring the quality of study programmes and short courses will also be digitally supported. The platform will include a catalogue of courses to promote and facilitate enrolment in short courses. UM is also developing support for managing micro-credentials in the form of verifiable digital credentials.

The success of micro-credentials will depend on effective collaboration with external stakeholders and the establishment of a system ensuring quality, transparency, cross-border comparability, recognition, and transferability. Only then can micro-credentials reach their full potential. With an appropriate lifelong learning offer, participants will become more resilient to labour market changes, and the University of Maribor will responsibly contribute to the development of society as a whole which is its core mission.

4 Green Transition and Digitalization Processes

4.1 Green Transition

The University of Maribor is successfully implementing 23 pilot projects in the field of green transition aimed at ensuring sustainable operations (Univerza v Mariboru, 2022). These projects are funded by the Ministry of Higher Education, Science and Innovation. The university has made significant progress in adopting and introducing sustainability measures in communication and administration, including extensive use of electronic signatures, conducting parts of administrative procedures online, and eliminating the need for printing documents. Currently, 45% of laboratories/departments/centres at the university are actively engaged in green transition initiatives. All university members have included measures or guidelines for the green transition in their work plans or action plans (Murko, 2024). The experience of remote work during the pandemic has increased acceptance of virtual presence and videoconferencing, reducing the need for mobility which is particularly important for University of Maribor members located in other Slovenian regions, where travel requirements have been significantly reduced thanks to these options.

Over the past five years, the University of Maribor has significantly improved the energy efficiency of its buildings through investments in renovation and energy upgrades, especially in student dormitories. It is now entering a new investment cycle in building infrastructure: over the next five years, 12 university members will be included in projects involving sustainable and energy-efficient new constructions and renovations between 2025 and 2030, marking important steps toward achieving the set green transition goals.

Within the 23 pilot projects under the Recovery and Resilience Plan (RRP projects), university members are developing study content that integrates green transition topics to strengthen participants' green and digital competences. The activities are guided by the goal of piloting the transfer of essential and current expert knowledge from inside and outside the education system into formats that will enable diverse and flexible pathways for obtaining micro-credentials. The objectives also include updating study programmes with content that will enable graduates to acquire competences aligned with the modern needs of employers for the transition to a sustainable, circular, and digitalized economy – competences that will allow rapid and flexible employment across various fields and encourage graduates to engage in lifelong learning and actively participate in development activities for the green transition.

Key activities also include introducing paperless operations across all UM members, creating synergies for students, external stakeholders, and staff. By implementing paperless processes, the university supports systemic changes in higher education infrastructure through increased use of ICT and low-carbon ethical digitalization.

An important aspect of the green transition is raising awareness and empowering the academic community. Therefore, activities focus on systematic education of the academic community on green and digital topics. As part of these activities, sets of course units on environmental and digital empowerment will be implemented, providing heterogeneous learning content that will address the two fundamental areas – digital and green transition – from multiple perspectives. As part of the pilot project activities, a greater share of project-based, problem-oriented, and teamwork will be integrated into various study programmes, thereby fully or partially replacing traditional forms of pedagogical and independent student work with project-based, problem-oriented, and/or team work. Another major goal of pilot projects is establishing a single virtual entry point of the University of Maribor for employers and to develop innovative forms of cooperation between students and employers for an effective detection, adaptation and responsiveness of the University to the changing needs of the labour market in selected fields of educational and other activities, taking into account the principles of a green and digital transition to Society 5.0.

Through these RRP projects, UM is taking significant steps toward achieving the set green transition objectives. The university recognizes that achieving sustainable living goals requires collaboration across the entire academic and local community. UM will continue developing comprehensive strategies and action plans that encompass all aspects of sustainable living. Through the implementation of pilot projects under the Recovery and Resilience Plan, we will integrate sustainability practices into study programmes to a significant extent, thereby empowering students to address environmental challenges associated with green transition activities.

4.2 Ensuring Information Security

The pace of technological change is increasing. Organizations continue to invest in technologies to manage their operations and to execute their business processes more successfully and efficiently. At the same time, new systems are accumulating, such as those supporting remote work and those aimed at improving user experience. Simultaneously, there is a growing number of factors that threaten the confidentiality, integrity, and availability of information. The emergence of ever-new internet threats has become a constant challenge in ensuring stable, uninterrupted business operations and in managing pressures in today's environment. Such challenges also present an opportunity to develop a more proactive and comprehensive approach that would ensure a higher level of resilience.

Disruptive and often successful cyberattacks are more frequent, sophisticated, and effective than ever before, targeting organizations of all industries and sizes. Cybercrime is expected to reach the size of the world's third-largest economy – after the USA and China – by 2025 and, globally, will become a more profitable form of crime than all types of illegal drug trade (Morgan, 2024). Every day we read and hear about new cyberattacks, with increasingly advanced attack vectors emerging. Risk factors that must be managed in the field of information security to maintain the three fundamental pillars of security have long surpassed purely technological risks. Cybersecurity involves the application and implementation of a set of standards, frameworks, rules, recommendations, and practices that organizations use to protect their applications, data, programmes, networks, and systems from cyberattacks and unauthorized access.

First, it is necessary to understand the risks and plan measures for their management in a timely manner. The basic standard that defines risk management guidelines is ISO 31000, which also includes an annex with a practical guide for implementing this standard. ISO 31010 provides more detailed guidance on selecting and applying various techniques for risk assessment. The strength of these documents lies in their unified and systematic overview of principles and methods for risk management.

In the field of internationally recognized standards for ensuring information security, the leading family of standards is ISO 27000 (International Organization for Standardization, n.d.), with the first standard adopted as early as 2000. This is a collection of approximately one hundred standards covering areas such as: information security management, security risk management (complementing ISO 31010 and ISO 27005, which focuses solely on risk management within the 27001 framework), information security audits, definition of security controls (in networks, software), incident handling, and privacy assurance. These standards are regularly updated by the issuing body and are generally process-oriented. ISO standards themselves are not inexpensive, and to achieve compliance, expressed through a time-limited certificate, an organization must successfully undergo formal reviews or audits.

Another important group of standards in the field of information security comes from the U.S. National Institute of Standards and Technology (NIST). The SP 800.53 framework (National Institute of Standards and Technology, 2020) is based on five steps: Identify, Protect, Detect, Respond, and Recover. These standards offer numerous security controls, such as access controls, configuration management, information security awareness training, and incident response. More practically oriented is the NIST Cybersecurity Framework (CSF) (National Institute of Standards and Technology, 2024), which, based on the same five steps, provides a set of guidelines and best practices that organizations can use to identify, assess, and manage cybersecurity risks. Compared to the mentioned ISO standards, NIST recommendations are more specific and updated more frequently.

In addition to these groups of standards for ensuring information security, organizations often use recommendations from the Centre for Internet Security (CIS Controls), which aim to mitigate the most common cyberattacks on modern systems and networks. There are numerous mappings of these controls to the already

mentioned NIST CSF and other standards. The advantage of CIS recommendations lies in their practical application, as there are tools available that allow required configurations to be implemented relatively easily across different systems (CIS Benchmarks). Due to numerous technical limitations caused by such configurations, they are quite unpopular among system administrators.

Similarly, the MITRE ATT&CK® knowledge base can be used to ensure information security. It is a globally accessible database of attacker tactics and techniques. Its uniqueness lies in the fact that it is based on real-world observations. The knowledge base is used as a foundation for developing specific threat models and methodologies in the private sector, government institutions, various developer communities, and cybersecurity service providers.

In the area of controls, the most widely adopted tool is COBIT (first version published already in 1996), a framework for managing and governing information technology. It is a collection of best practices and procedures for achieving an organization's strategic objectives through effective use of available resources and minimizing IT risks. COBIT is a process-oriented tool that divides IT operations into four domains and more than 30 processes. It is harmonized with other standards and best practices, including the ISO family, as well as CISO, ITIL, CMMI, TOGAF, and PMBOK. Importantly, the latest versions are also aligned with the IT Assurance Framework (ITAF), which significantly increases transparency.

For data protection and cybersecurity risk management, the EU prescribes several directives and regulations, such as GDPR, DORA, and NIS-2, which generally impose relatively strict requirements. However, compliance with specific regulations depends on the industry or other criteria (e.g., company size). For example, NIS-2 requirements focus on critical and essential service providers. Additionally, Europe has tightened oversight of Internet of Things (IoT) devices through the Cyber Resilience Act. NIS-2 requires member states to strengthen their cybersecurity capabilities while introducing measures for risk management and reporting obligations for entities across multiple sectors. It also sets rules for cooperation, information sharing, supervision, and enforcement of cybersecurity measures. Obligated entities must adopt proportionate technical, operational, and organizational measures to ensure cybersecurity, including securing the entire lifecycle of all products involved in IT solutions. Key measures include managing

and preventing exploitation of technical vulnerabilities, ensuring and maintaining logging, implementing and managing data backups, and identity and access management. Most of these regulations also focus on the consequences of cybersecurity incidents, including how incidents are reported and how organizations provide assurance of their recovery capabilities. It is particularly important to emphasize that the NIS-2 directive explicitly introduces top management accountability for non-compliance with cybersecurity risk management measures.

Today's information security programmes encompass creating an appropriate security culture and awareness, mature information security management, risk management, meeting security requirements for compliance, reducing supplier and third-party risks, implementing zero trust, vulnerability and threat management, secure cloud services, modernizing identity and access management, preparing for ransomware attacks and other security incidents, achieving required levels of personal data protection, and generally improving security posture and data exposure (Info-Tech research group, n.d.).

Initiatives at both organizational and local levels aimed at strengthening secure behaviour and culture, managing third-party risks related to generative artificial intelligence, and improving companies' perception of cybersecurity represent an exceptional opportunity for organizational leaders. Collaboration between IT managers and business executives in addressing these areas can deliver a dual benefit: it promotes secure business transformation and builds resilience within the organization. When preparing security plans, we must do more than blindly follow best-practice frameworks or standards. Only a proactive information security strategy that is comprehensive, risk-aware, and aligned with business needs can help us manage emerging and future changes. Recently, artificial intelligence has transformed the "security landscape," and organizations will also need to protect themselves against increasingly sophisticated threat actors. New attack vectors and methods, such as deepfakes and quantum computing, require more than reactive behaviour. One of the greatest challenges in the ICT industry is ensuring adequate, competent personnel, especially in the field of cybersecurity. It is particularly concerning that Slovenia faces the most significant difficulties among all EU countries in attracting ICT professionals (Varga, 2024).

4.2.1 Ensuring Information Security at the University of Maribor

In 2013, following a public consultation, the Senate of the University of Maribor adopted the Information Security Policy (ISP) with a clearly defined goal "to ensure uninterrupted and secure operations of UM and to reduce damage by preventing and mitigating the consequences of undesirable information security events." The ISP is aligned with the recommendations of the ISO 27001 family of standards and applies to all users of the university's information system. Controls were defined by areas, and compliance was verified at least once a year. User identity and access management has been fully automated for over a decade. Annual external information security checks (penetration tests) are carried out, as well as user training on information security awareness, although participation is not formally required.

A significant milestone in raising awareness of information security occurred after a security incident in October 2024, which disabled the operation of the university's computer system. All user-facing systems and services were fully restored, and data was recovered without loss or leakage. The incident enabled something previously unattainable – the immediate implementation of two-factor authentication for system logins, which did not cause resistance among users accustomed to working in a much less regulated environment.

Undoubtedly, the University of Maribor will need to significantly strengthen its efforts to establish an effective information security system, including building a competent internal team. Although the university is not currently subject to European information security directives (e.g., NIS-2), it is advisable to adhere to these principles.

While the existing ISP remains fully relevant and without major shortcomings, it will be updated this year. It will be necessary to establish information security management systems and a business continuity management system, based on a prior risk analysis. Recovery and restoration plans must undergo regular testing and validation. Regular external security audits and ongoing training will continue. A key requirement will be maintaining the definition of system owners (already specified in the current ISP), their role in risk identification and analysis, and the execution of system ownership tasks. Roles of internal departments (such as the legal office or

public relations office) must be defined in the incident response plan, with clear RACI assignments (Responsible, Accountable, Consulted, and Informed).

Approved policies and prepared plans are not enough – enhanced resilience requires continuous monitoring of risks and the effectiveness of necessary measures, as well as regular reviews. This cannot be achieved without a deliberate strengthening of capabilities (a critical shortage of internal IT staff has been identified) and long-term provision of conditions for systematic implementation of required activities and technical measures.

4.3 Artificial Intelligence in University Operations

With its ability to communicate with humans, recognize and classify patterns, recreate artistic content, learn, and rapidly evaluate decision-making strategies, artificial intelligence has long fascinated the broader public. This raises the question of how current and future advancements in AI can be applied in research and pedagogical processes, as well as in the overall functioning of the university. In this context, artificial intelligence is understood as autonomous computer systems capable of learning, reasoning, problem-solving, pattern recognition, and adapting to new situations or planning and providing suggestions that assist humans in decision-making. The implementation of such systems is mostly based on domain-specific learning, which enables pattern recognition in the present and future predictions based on past examples. The usefulness of AI extends to virtually all areas of human activity. However, caution is necessary, as so far we have only developed systems of so-called weak AI, which can learn to perform specific tasks from past patterns but cannot transfer learned knowledge across domains, reason on that basis, or form their own opinions. The effectiveness of AI is therefore directly dependent on the quality and scope of the data used for its learning. A lack of similar patterns in the past results in guesswork, while errors in learning data lead to errors in processing current patterns. It is no surprise that AI applications have achieved the greatest success in areas with abundant learning data. Among these are also educational processes.

Explainable AI describes approaches and tools that allow humans to understand the principles behind AI decision-making. Such systems can be evaluated and, to some extent, corrected. They can incorporate mechanisms to ensure security, privacy, and

adherence to ethical and moral principles. At the same time, these approaches enable the discovery of hidden patterns within learning examples and potentially uncover new knowledge. Explainable AI thus has a significant impact on research processes and science in general. It allows simplified analysis of vast amounts of experimental data and helps distinguish complex interactions among various influencing factors that define observed processes and natural or social phenomena. The European Commission recognizes this, defining AI as a catalyst for scientific breakthroughs and a key instrument in the scientific process.

Recently, the European AI strategy was introduced (European Commission, 2018), aiming to position the EU as a leader in AI development and ensure that AI is trustworthy and human-centred. This strategy includes substantial investments in the development of computational capacity, software, and solutions across different levels of technological maturity. Computational and software infrastructure is thus becoming essential research equipment – future research will be unimaginable without it. The race is on, and our competitors recognize the importance of AI and are rapidly developing internal capacities for its use. Software infrastructure is evolving into an enabling technology and a horizontal component, no longer limited to technological and natural sciences but increasingly supporting social sciences and humanities.

Until now, intellectual work was understood as requiring specific knowledge for planning, problem-solving, calculation, creation, management, control and other activities involving complex thinking. In doing so, we have largely treated as an intellectual work any activity involving the above activities, regardless of which of these it required and to what extent. AI systems introduce the need for a new perspective on intellectual work. The core of today's AI systems consists of statistical classifiers, meaning they do not truly understand the data they process. Thus, current AI systems can only perform routine intellectual tasks that do not require contextual understanding – essentially, intelligence without reason. Using AI systems in performing various tasks today reveals the extent to which these tasks, which we have often understood as intellectual work, can be performed simply by taking into account narrower or broader contexts and recognizing patterns within them, without the need to understand the content of the work. It is worth pointing out, that some of these tasks can still be highly complex.

In the future, it will be useful to distinguish between parts of intellectual work that can be classified as intellectual routine (not requiring contextual understanding) and parts that involve innovation and creativity, requiring complex reasoning and contextual understanding.

This distinction is important because AI systems are expected to take over most tasks that can be performed through intellectual routines. Future AI development and its practical application will likely reveal the extent of intellectual routine in many tasks previously considered intellectual work. While AI will relieve humans of much routine work – including intellectual tasks – the degree of routine and the necessity of human involvement in producing final results will raise the bar for human competitiveness, requiring greater innovation, creativity, and the ability to understand complex problems. At today's level of AI development, the added value of human work will primarily lie in understanding AI-generated results and in innovative and creative thinking.

4.3.1 AI Systems and the Labour Market

The rapid development of AI systems and the exponential growth of their applications in recent years will soon have a major impact on the disappearance of certain professions, at least in the form we know them today, while also enabling the emergence of new ones.

According to calculations by the World Economic Forum (WEF) in its April 2023 report (World Economic Forum, 2023), 14 million jobs worldwide will disappear by 2030, and a quarter of all jobs will undergo significant changes. By 2027, 69 million new jobs are expected to be created. However, the report also states that by the same year, 83 million jobs will disappear. This means a net decrease of 14 million jobs, or about 2% of all currently employed workers. According to the report's projections, the greatest changes can be expected in the entertainment and media industry, while the smallest changes will occur in hospitality and tourism.

Given the highly dynamic development of the labour market in the coming years and the anticipated major changes, it is crucial to understand the new threshold of workforce competitiveness introduced by emerging AI systems for various professions. In light of the World Economic Forum's (2023) predictions about the

future labour market, an important question arises: what skills were required for the 83 million jobs expected to disappear in the coming years and what skills and competences will be needed for the 69 million newly created jobs. Equally important is the question of how many of the 83 million workers losing their jobs will possess the necessary skills to fill any of the newly created 69 million positions. More than ever before, we must also ask how many of those displaced by AI systems will even be able to acquire the skills required for these new jobs. Considering the tasks that AI systems will take over, it is expected that the new jobs will primarily require skills that go beyond intellectual routine – namely, creative work, understanding complex problems, and innovative thinking. This undoubtedly poses significant new challenges for all generations and employee profiles.

4.3.2 AI Systems and Education

The widespread availability of large generative language models has had a significant impact on education as well. When these models first appeared, concerns were raised primarily about their negative effects and potential misuse, which could harm the quality of education. The current level of AI development cannot be ignored, nor can its continued evolution and application across various fields be prevented. Therefore, banning AI tools in education is not a sensible approach; instead, it is essential to understand their added value and integrate them into teaching in a way that enables the achievement of desired knowledge, competences, and skills.

Recent analyses show that over 85% of students have already used AI tools during their studies, while more than 50% use them regularly, at least once a week (Rong & Chun, 2024). Generative AI leads the way, helping students create summaries of study material, practice quizzes for exam preparation, and detailed explanations of content through dialogue. Although it is now clear that, due to the aforementioned limitations, weak artificial intelligence cannot replace humans in the learning process, it can nevertheless help us find the information we are looking for much more quickly and efficiently. We can reasonably expect that continued development will improve the reliability of these systems and, consequently, the accuracy of the information they provide. At all stages of the learning process, the focus can shift from dry presentation of facts and properties of learning entities to explaining their broader context, the reasons behind these properties, and their application in addressing today's challenges, thus greatly improving learning efficiency. In this

context, a noticeable trend toward personalized learning has already emerged, enabling learning at an individualized pace and in a way that best suits each learner. Intelligent mentoring systems, virtual assistants, and automated grading save time for educators and provide more accurate and consistent feedback. However, we must not overlook the ethical questions present in both teaching and research processes. Today, significant effort is invested in developing principles for ethical use and building trust in AI through explainable AI concepts.

In May 2023, the University of Maribor prepared guidelines for using generative AI tools in the pedagogical process (Univerza v Mariboru, Oddelek za izobraževanje in študij, 2023). These guidelines emphasize the need to strengthen awareness of responsible AI tools use in the pedagogical process and to remind all participants that the goal of education is the journey, not just the destination that we reach at the end. It is along this journey that we acquire the knowledge, skills, and competences necessary to achieve the desired outcome. Today, more than ever, we must recognize that using tools like ChatGPT can often deprive us of the path we should – or must – take ourselves. This also means losing the essential knowledge, skills, and competences that form the core of education. The key challenge ahead is how to use these tools while still walking the necessary path toward the goal. We must understand that there are no shortcuts to knowledge.

Moreover, as AI tools evolve, education will not become simpler, it will become more demanding. To remain competitive in the future labour market, students will need to acquire knowledge, skills, and abilities that go beyond intellectual routine. Given the current and anticipated capabilities of AI systems, a logical question arises whether understanding complex problems, innovative thinking, and creative work is possible without mastering intellectual routines.

4.3.3 Future Societal Development and the Inevitable Synergistic Operation of Various Technologies

The development of artificial intelligence tools will significantly influence the future evolution of society. Due to the rise and widespread use of large generative language models, which have deeply penetrated public awareness, society increasingly realizes that, to ensure successful sustainable development, it must act immediately to prevent or at least limit the misuse of these technologies and avoid, as much as

possible, the developmental pitfalls they bring. The demonstrated capabilities of AI systems, especially large generative language models, and the resulting predictions about their potential applications have caused considerable surprise in the society, mainly because these systems “threaten” a range of professions requiring a high level of education. Previous expectations regarding automation and robotics mostly suggested that modern technological development, like in the past, would primarily endanger jobs requiring lower levels of education.

Nevertheless, it is essential to recognize that the future will not be shaped by AI systems alone; rather, they will often be used in combination with other emerging technologies. Among these are wireless communication technologies such as 5G, 6G, and 7G. The 5G technology (already well established today) offers significantly higher data transfer capacities and lower latency (below 5 ms) with greater energy efficiency. This will enable much broader use of these technologies in industrial process automation and the development of the Internet of Things (IoT). The realization of the Industry 4.0 concept (full automation of production through so-called “dark factories,” where manufacturing processes occur without human workers), the development of autonomous devices and vehicles, and humanoid robots – all heavily incorporating AI systems – will also greatly impact professions requiring lower education levels and primarily involving physical and/or intellectual routines. The Industry 5.0 concept (similar to Japan’s Society 5.0) largely stems from the fact that AI systems, next-generation communication technologies, and automation and robotics processes in manufacturing and society will to a large extent take over tasks requiring routine intellectual or physical work. Human roles in such a society will primarily focus on purely creative and innovative work and on understanding and managing complex problems.

Therefore, continuous evaluation of the human role in modern society, its ability to coexist with rapidly evolving technology, and proactive resolution of key Society 5.0 issues will be crucial to avoid societal unpreparedness for new technological challenges, especially their negative effects, which we experienced on a much smaller scale with the rise of social media, and the harmful consequences feared with the advent of AI systems. The responsibility of universities – as autonomous educational and research institutions – toward society in fulfilling their mission will thus become even greater. They will need to educate professionals capable of surpassing the threshold of intellectual routine and empowered to use AI tools effectively, while

also developing responsible science to provide solutions that minimize misuse and technological pitfalls.

Artificial intelligence will undoubtedly have a profound and lasting impact on the development of universities and fundamentally transform some key operational processes. Adaptations to this reality are inevitable. It is up to us to implement them timely, strategically, and effectively, and to use them to become better. Greater flexibility, simplification of administrative procedures, and data-driven decision-making in management processes are guiding principles that must also be pursued in the operations and functioning of the university as an institution.

5 Collaboration with the Environment and Effective Transfer of Knowledge and Technologies in the Future

Collaboration with the economy and the social environment, as well as the effective transfer of knowledge and technologies, have been and remain key commitments of the University of Maribor in fulfilling its third mission.

Successful cooperation and support for the activities of researchers and students of the University of Maribor in the field of knowledge and technology transfer (Univerza v Mariboru, n.d.-a) is provided by the Knowledge and Technology Transfer Office in cooperation with other university services. The Office successfully manages knowledge transfer activities also within the largest business support network, the Enterprise Europe Network, of which the University of Maribor is a part and which has established contact points in more than 60 countries worldwide.

The University of Maribor is the coordinator of the DIGI-SI consortium, the purpose of which is to actively accelerate the digital transformation of the economy and the public sector. Within the project, the university offers a wide range of services that help companies and the public sector in their digitalization efforts.

5.1 Technological Innovation Centre of the University of Maribor – INNOVUM Platform

To achieve even more successful collaboration and transfer of knowledge and technologies to the environment, the University of Maribor has developed the concept of the INNOVUM platform as a systemic solution (INNOVUM, 2025). The platform consists of three pillars: human resources and RDI projects (operating in accordance with the principles of open science), research infrastructure (providing open access to public high-tech research infrastructure), and a supportive environment (Technological Innovation Centre – support for open innovation).

By establishing the Technological Innovation Centre, the University of Maribor will provide effective central infrastructural support for scientific research and innovation processes, as well as for the transfer of knowledge and technologies to the environment. The Technological Innovation Centre will primarily focus on supporting breakthrough high-tech entrepreneurial projects driven by innovation and research, carried out by new and established companies that represent 3–4 percent of the business population. By providing spatial infrastructure, research and development human resources, top-tier research equipment, and various services in the fields of innovation, intellectual property protection, and the development of a supportive environment programme, the key conditions will be created for achieving effective knowledge and technology transfer in the segment of breakthrough innovations and beyond.

The development of the INNOVUM platform represents an important contribution of the University of Maribor to building the foundations for development and innovation breakthroughs in the cohesion region of Eastern Slovenia through the lens of economic development.

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From the Review

RADO BOHINC

President of the Euro-Mediterranean University

In the scientific monograph *50 Years of the University of Maribor: Half a Century of Scholarship and Research*, edited by Gorazd Meško and Natalija Ulčnik, more than fifty authors present, in eleven contributions, numerous areas of university activity and creation – from its founding to the present day – and the key factors of its development. The book first introduces historical facts and periods, as well as the process of establishing the university, followed by its legal, personnel, and spatial aspects, education and research, and students. Later chapters address internationalization, sustainability and quality aspects, and the European integration of universities.

The monograph, supported by numerous data and reflections, conveys the message of the current generation of higher education teachers and researchers at the University of Maribor about the 50-year journey, with a determined outlook toward the future shaped by contemporary knowledge trends and demanding global societal challenges. The monograph will serve as a very useful professional and research tool, not only for those designing academic and development strategies for the future but also for all engaged in research and pedagogical activities at the University of Maribor and beyond.

From the Review

STANE PEJOVNIK

Former Rector and Professor Emeritus of the University of Ljubljana

On the fiftieth anniversary of Slovenia's second-largest university, we are presented with a scientific monograph created by more than fifty authors, almost all closely connected with the University of Maribor as current or former researchers, educators, and officials. Under the editorial leadership of Gorazd Meško and Natalija Ulčnik, an extensive work has emerged, divided into eleven thematically well-structured chapters that offer readers a comprehensive, fact-rich, and document-supported overview of the university's development from its beginnings to the present day.

At first glance, the monograph stands out for its high editorial and technical quality, surpassing the usual commemorative publications issued for anniversaries.

The contributions do not merely summarize existing documents but often include thematically relevant analyses, longitudinal data, statistical presentations, and interpretations with added scientific value. For this reason, the book also has potential as a reference source for research in higher education, university history, regional development, and organizational studies.

In addition, the stylistic maturity of the authors deserves praise, as they successfully intertwine descriptive, analytical, and reflective elements. Thus, the work is not only an institutional portrait but also a well-founded testimony to the role of the university as a complex, dynamic, and multifaceted social institution.

The book *50 Years of the University of Maribor* is a high-quality, scientifically relevant, and technically excellent monograph that undoubtedly ranks among the best publications of its kind in Slovenia. The editors and authors have accomplished a significant task that will be important both for the internal history of the University of Maribor and for a broader understanding of the development of higher education in Slovenia.

However, anniversaries are not only an opportunity to review the past but also a necessity for articulating future goals. In this respect, the book should have better seized the opportunity to convincingly answer two questions: What does it mean today to be a university in a medium-sized European country? What does this specifically mean for the University of Maribor? This is a challenge for future publications about the University of Maribor and its activities.

From the Review

PETER UMEK

Professor Emeritus of the University of Maribor

I read the extensive monograph with great interest and learned many new things about the establishment of the University of Maribor. In 1972, I began working as an assistant at the Faculty of Arts of the University of Ljubljana and, like many others in academic circles, I sceptically observed and evaluated the creation of a new university centre in Maribor. The prevailing opinion was that Slovenia did not need another university and that there were not enough qualified university teachers. The suggestion was that higher education institutions should remain as they were, producing professionals for industry, while science should continue to develop in Ljubljana. However, persistence and well-reasoned arguments for establishing faculties and a university convinced the political leadership of the time to support the idea, and in 1975 a new university was founded, which developed thoughtfully and rapidly. The University of Maribor became a respected and internationally recognized institution. Everything about this well-considered development is recorded in this monograph.

By 1990, I was personally convinced that the University of Maribor met and exceeded the conditions for a modern university. I joined what is now the Faculty of Criminal Justice and Security and, as a professor with the highest academic title, represented the faculty in the human resources committee and the senate. I came to

understand that, despite the need for new higher education teachers, there was no relaxation of the demanding criteria for academic appointments; that the senate engaged in extensive discussions on pedagogical work and encouraged the development of research; that student issues were not neglected and their opinions were taken into account; and that this was an open university with a clear vision for the future, embracing and overcoming the challenges of modern times.

About the Editors and Authors

Igor Areh is the Head of the Chair of Social Studies, Humanities, and Methodology at the Faculty of Criminal Justice and Security, University of Maribor. He specializes in the field of forensic psychology, investigative interviewing, the collection of information from human sources, forensic personality assessment, deception detection, and the evaluation of the credibility of testimony. In practice, he works as a consultant and expert in the field of forensic and investigative psychology. He is a member of the European Registry of Exonerations. At Justus Liebig University in Giessen, Germany, he contributed to the development of a white paper on the dangers of the infiltration of pseudo-scientific techniques into the justice system. He also served on the advisory board of Juan Méndez, the former United Nations (UN) Special Rapporteur on Human Rights. He is the president of Division 10, Psychology, Law & Ethics of the International Association of Applied Psychology.

Mojca Bernik is the acting Vice-Dean for Education at the Faculty of Organizational Sciences, University of Maribor. She is the Head of the Chair of Human Resources Systems and a member of the Strategic Council of the program Organization and Management of Human Resources and Educational Systems, where her research achievements contribute to the program's relevance. Her research interests focus on two main areas: the development of human resources management in organizations and the challenges of personnel planning. Throughout her career, she has participated in numerous projects pertaining to Slovenian economy as well as in international projects. The results of her research work are evident in numerous publications both domestically and abroad.

Gorazd Bajc is a member of the Department of History at the Faculty of Arts, University of Maribor, where he teaches the history of Europe, the Balkans, and the Slovenian territory in the 20th century. At the Faculty of Arts in Maribor, he also serves as Vice-Dean for Scientific Research and Doctoral Studies. He is Head of the research program Slovenian Identity and Cultural Awareness in Linguistic and Ethnic Contact Areas in Past and Present, the large ARIS basic project AID HCH – *Break Through in Humanities and Cultural Heritage with Artificial Intelligence*, and the University of Maribor's program core *Heritage Science and Climate Change: New Research with Interdisciplinary Approach and the Use of Artificial Intelligence*. His research areas include the history of international relations, intelligence services, Yugoslav/Slovenian-Italian relations, the legal status of the Slovenian minority in Italy, anti-fascism, and violence — including the so-called foibe massacres, as well as violence against women in the Primorska and Istria regions during the transitional periods following the First and Second World Wars.

Darko Friš has been the Dean of the Faculty of Arts, University of Maribor since 2019. Previously, at the former Faculty of Education of the University of Maribor, he served as Vice-Dean for Research and was for many years the Head of the Department of History at both the Faculty of Education and the Faculty of Arts. He has served multiple terms as a member of the Senate of both faculties. Since 1999, he has led the research program *The Past of North-Eastern Slovenia among Slovenian Historical Lands and in Interaction with the European Neighbourhood*, moreover, he has managed and participated in numerous research projects. His scholarly work primarily focuses on Slovenian history between the two World Wars and the period after 1980.

He is a Full Professor of contemporary history and teaches several courses across all levels of study programs. He is the founder and editor-in-chief of the scientific journal *Studia historica Slovenica* and editor of a book series. Since 1996, he has organized prominent international scientific symposia every year, significantly contributing to the development of historiography.

Nomi Hrast, M.Sc. in Economics and Business, has served as Vice-Rector for Student Affairs at the University of Maribor since 2022. Prior to that, from 2020 to 2022, she held the position of Vice-Dean for Student Affairs at the Faculty of Economics and Business of the University of Maribor (EPF UM). She is a member of the Senate of the University of Maribor and several University committees, as well as a member of the Senate of EPF UM and several committees. She is deeply involved in university student representation, advocacy, sustainable development, and academic progress, and also participates in national and international projects. In addition to her academic responsibilities, she is active in the development of student organization and in improving the student standard. Her work is characterized by dedication to the academic community, a commitment to a transparent and sustainable future of the university, and a strong desire to create a high-quality higher education environment.

Sebastijan Frumen, Professor of Slovenian language, is the Head of the Department for Education and Study at the University of Maribor that is monitoring and assuring the quality of study programs in accordance with ESG standards. A special focus is placed on creating an inclusive educational environment that will contribute to improving the quality of education and enable students to develop their diverse potentials in a comprehensive and balanced way. The department also addresses the needs of society in acquiring knowledge necessary for sustainable development, both during studies and through lifelong learning, including the implementation of micro-credentials. As a doctoral student in the field of higher education didactics, his research focuses on introducing flexible learning pathways

and future learning environments in higher education.

Peter Gabrijelčič, M.Sc. in Architecture, Professor Emeritus of the University of Ljubljana, M.Phil., was born in 1947 in Maribor. He completed his studies in architecture at the University of Ljubljana under Professor Edvard Ravnikar. From 1974 to 2017, he was employed at the University of Ljubljana, where in 1995 he was appointed acting Dean of the newly established Faculty of Architecture, later serving as long-time Dean (2001–2017) and Full Professor. He lectured on architecture and urbanism and introduced a course of study in rural and landscape planning. Between 1999 and 2016, he led a specialist program in urban planning in cooperation with Oxford Brookes University and was a supervisor to 512 graduates. He was the initiator and coordinator of the spatial development “project” of the University of Maribor, city architect of Ptuj, and founder of the architectural firm ARHITEKTURA, d.o.o. He has received numerous awards for his work, including the Prešeren Fund Award, the Yugoslav Borba Award, and the Golden and Platinum Pencil. He is co-author of award-winning bridges in Slovenia and abroad, and author of numerous professional and scientific articles. He actively participates in national and international academic and professional associations.

Izidor Golob has been the Head of the Computer Centre at the University of Maribor since 2009. Prior to that, he served as the Director of the Secretariat of the Council for Higher Education (now NAKVIS), and he began his professional career in 1997 as an assistant and researcher at the Faculty of Electrical Engineering and Computer Science at the University of Maribor (FERI UM). For several years, he was the President of the ARNES Expert Council. In his professional field, he holds CISA, CISM, and ITIL F certificates.

Petra Gorjanc, spec. in org. and man., has been connected with the Faculty of Organizational Sciences of the University of Maribor for over twenty years. She is currently responsible for the field of faculty’s cooperation

with the environment, focusing on connecting the faculty with companies and other organizations, as well as fostering its collaboration with the academic and professional public. As the head of organizing committees, she plays an active role in organizing various international conferences, national consultations, study visits, and is involved in organizational activities of scientific and research projects. She also oversees the implementation of international and other events at the faculty and encourages students to connect and integrate into working environments.

Ema Hauc is a second-year undergraduate student of Media Communications at the Faculty of Electrical Engineering and Computer Science (FERI UM). Since the beginning of her studies in 2023, she has been a student representative in the FERI UM Student Council. In 2025, she also joined the Student Council of the University of Maribor, where she contributes to various projects and article writing.

Šime Ivanjko, Professor Emeritus of the University of Maribor, completed his entire legal education as a working student – starting at the School of Law in Maribor (first cycle), followed by the Faculty of Law in Ljubljana (second cycle and PhD), the Faculty of Law in Zagreb (Master's degree), and the Faculty of Law in Hamburg (specialization in insurance). He was employed at Zavarovalnica Maribor and in the business sector (from 1962). From 1970 onward, he was employed at the School of Law and later the Faculty of Law, as well as at the School of Economics and Commerce in Maribor. For several years, he was a private higher education teacher. He taught economic subjects not only in Slovenia but also in Rijeka and Zadar. He served three terms as Director or Dean of the Faculty of Law, University of Maribor, and one term as Vice-Rector. The University of Maribor awarded him the title of Professor Emeritus. The Association of Lawyers of Slovenia honoured him with a lifetime achievement award. He received state decorations from both the Republic of Croatia and Austria. He is also the co-founder and president of the Slovenian Academy of Legal Sciences and a member of the Croatian Academy of Legal Sciences. He is active

in business consulting and publishing. He served multiple terms as President of the Association of Insurance Companies of Yugoslavia. He is the Honorary Consul of the Republic of Croatia. He is also a co-author of numerous legal drafts. Since his retirement in 2012, he has been active in social media and is the author of several published books. He currently leads the Centre for Professors Emeriti and Retired Higher Education Teachers of the University of Maribor. He was also a *signatory of the founding act of the University of Maribor (September 18, 1975)*.

Anita Ješovnik, M.Sc. in Economics and Business, has been employed at the University of Maribor since 2008. Between 2010 and 2022, she was the Head of the Study and Student Affairs Office at the Faculty of Mechanical Engineering of the University of Maribor. For her professional work, she received a recognition award from the Faculty of Mechanical Engineering, UM. Since December 2022, she has been the Head of the Centre for Lifelong Learning within the Department for Education and Study at the University of Maribor. She is actively involved in the development of the lifelong learning and micro-credential ecosystem at the University of Maribor and, in cooperation with Boštjan Vlaovič, leads activities within the Recovery and Resilience Plan project titled Agile Development of Education and Micro-Credentials.

Zdravko Kačič has been serving as the Rector of the University of Maribor since 2018. Between 2011 and 2015, he held the position of Vice-Rector for Financial Affairs at the University of Maribor. He is a Full Professor at the Faculty of Electrical Engineering and Computer Science (FERI UM), where he teaches several courses within Electrical Engineering and Telecommunications study programmes. His research focuses on the scientific field of Telecommunications.

Rajko Knez is a Full Professor of Law and has related to the University of Maribor since his student days. He holds the title of Jean Monnet Professor of EU Law. From 2007 to 2011, he served as Dean of the Faculty of Law of the University of Maribor. He is currently a judge

at the Constitutional Court of the Republic of Slovenia.

Željko Knez is a member of the Slovenian Academy of Sciences and Arts (SAZU), former Dean and current Vice-Dean of the Faculty of Chemistry and Chemical Engineering of the University of Maribor. He is also a visiting professor at the University of Zagreb (Croatia). In the past, he served as Acting Rector and Vice-Rector of the University of Maribor. He earned both his undergraduate and doctoral degrees at the University of Maribor. He conducted research in the field of separation processes at Wageningen University (Netherlands) and the University of Erlangen (Germany). He was a member of the Executive Board of the European Federation of Chemical Engineering (EFCE). From 2003 to 2010, he chaired the EFCE Working Party on High Pressure Technologies and was a member of several professional and scientific organizations (EFCE Product Design and Engineering Section, The American Oil Chemists' Society, International Society for Advancement of Supercritical Fluids – Nancy, France, ProcessNet – Dechema, Frankfurt). Since 2014, he has been a member of the European Academy of Sciences and Arts, since June 2017 a member of the Slovenian Academy of Sciences and Arts, and since May 2019, a member of the Croatian Academy of Engineering. He is a recipient of the Zois Certificate of Recognition and the Zois Lifetime Achievement Award. He is an honorary member of the University of Maribor Professors Association. His research focuses on the use of subcritical and supercritical fluids at pressures up to 7,000 bar. He has published over 436 articles in SCI journals and delivered more than 650 presentations at various conferences. He has over 16,800 citations and an h-index of 67. In 2017, he was among the top 1% of most cited authors, and in 2022, 2023, and 2024, he ranked among the top 0.35% of the world's most successful authors according to the ranking of Stanford University. He is the author or co-author of 42 patents (EU, Can, US, WO, JP, etc.) and patent applications, and co-author of 30 books published by Taylor and Francis, Wiley, Woodhead Publishing, Elsevier, Springer, and others. In the field of supercritical fluid applications, he collaborates with industrial partners from Europe and Canada.

Dean Korošak is the Vice-Rector for Science and Research at the University of Maribor since 2022. His research focuses on statistical physics and the application of mathematical physics methods in physiology. He is a Full Professor and Head of the Chair for Applied Physics at the Faculty of Civil Engineering, Transportation Engineering and Architecture of the University of Maribor.

Mladen Kraljić, LLB, is employed at the University of Maribor since 2000. From 2000 to 2006, he was Head of the Office for International and Inter-University Cooperation. Between 2007 and 2011, he served as Secretary of the Faculty of Arts, and from 2012 to 2016, he was Head of the Department of International Cooperation at the University of Maribor. From 2016 to 2018, he briefly held the position of Secretary General of the University of Maribor. Since 2018, he has once again been leading the Department of International Cooperation.

Jelena Krivograd, M.A. in Economics, is the Head of the Scientific Institute at the Faculty of Education, University of Maribor (PEF UM), which functions as the faculty's international and project office. In cooperation with researchers at PEF UM, she actively participates in project proposal submissions and in the administrative and financial implementation of national and international research and development projects. As Erasmus Coordinator, she is responsible for the implementation and development of student and staff mobility. She also contributes to the preparation of strategic documents related to scientific research and international activities.

Luka Lah is a first-year master's student of Media Communications at the Faculty of Electrical Engineering and Computer Science of the University of Maribor (FERI UM). Since his second year of undergraduate studies, he has been actively involved in the faculty's Student Council. Since 2023, he has served as Secretary of the Student Council of the University of Maribor, where he contributes to the university's highest-level of student representation activities. He is also a member of several committees and

representative bodies at both the university and his home faculty.

Dunja Legat holds an MA in Library Science and is a Junior Library Councillor. Since 2021, she has been the Director of the University of Maribor Library (UKM). She has been part of the UKM team since 1996, initially working as an editor of the university bibliography, later in the field of processing periodical publications, and since 2015 as the Assistant Director of UKM. She has actively contributed to the development of many library activities, such as the implementation of personal bibliographies in the COBISS system and the revision of the typology of documents/works for managing researchers' bibliographies. She also played a key role in the creation of the Digital Library of the University of Maribor, its management, and the development of its services. She initiated the development of library support services in the field of open science, served for many years as the Chair of the UKM Quality Committee, and has been actively involved in drafting strategic documents for the library, the university, and at the national level. She is also the Head of the University of Maribor Press and the university's representative in the National Council for Library Services at the Ministry of Culture.

Uroš Lobnik, born in 1965 in Maribor, is an Associate Professor of Architecture. He completed his studies in architecture at the Faculty of Architecture, University of Ljubljana, under Professor Dušan Moškon. He began his professional career at ZUM, d.o.o., where he led the development of the Urban Design Plan for the city of Maribor. He later co-founded the architectural firm AU arhitekti, d.o.o. and joined the Faculty of Civil Engineering, Transportation Engineering and Architecture of the University of Maribor. As Head of the Department of Architecture and the Chair of Spatial Planning, he significantly contributed to the development of architectural studies in Maribor. Between 2011 and 2015, he served as the University Architect of the University of Maribor. He founded the Maribor House of Architecture and coordinated UM projects within the European Capital of Culture Maribor 2012. He actively contributes to the architectural profession as the author of

numerous texts, long-time editor of *Arhitekturna beseda* (Večer, 2000–2012), member of editorial boards (*Arhitektov bilten*, *Piranesi*), workshop organizer, and exhibition curator. His work has earned him recognition from the European Urban Planning Association, the Constructive Alps award, several Plečnik medals, and the Golden Pencil award.

Žiga Majcen is a student of the double-major university study programme in Geography and History at the Faculty of Arts, University of Maribor (FF UM). Since becoming a student at the University of Maribor, he has served as a student representative, and since 2023, he has also held the position of Vice-Dean for Student Affairs and President of the Student Council at FF UM. At both the faculty and university levels, he is a member of various committees and bodies, including the Senate of the University of Maribor, where he advocates for student interests and represents their views. During his studies, he has (co-)organized several projects and events.

Marko Marhl is a Full Professor who has related to the University of Maribor for over thirty years – not only as a teacher and researcher but also through active involvement in its governance, development, and quality assurance. He currently chairs the Quality Assessment Committee of the University of Maribor. In the past, he has held several positions, including Vice-Rector, University Senator, Dean, and multiple terms as Vice-Dean. He is also active in national expert bodies, participating in committees and councils of the Ministry of Education and the Slovenian Research and Innovation Agency. His international engagement includes numerous research stays abroad and participation in university associations and organizations. Notably, he has been a long-standing member of the Executive Committee of the IREG Observatory on Academic Ranking and Excellence, where he has been contributing to the development of global university ranking practices since its establishment.

Tadeja Melanšek, M.A. in History, is an Assistant at the Department of History of the Faculty of Arts, University of Maribor. She joined the faculty in 2021 as a young researcher and is currently working as an assistant on the project AID HCH – *Break Through in Humanities and Cultural Heritage with Artificial Intelligence*. Her research focuses on the development of higher education during the period of the Federal People's Republic of Yugoslavia and the Socialist Federal Republic of Yugoslavia. As part of her doctoral studies, she is preparing a dissertation on the founding of the University of Maribor.

Gorazd Meško is a Full Professor of Criminology and Head of the Chair of Criminology at the Faculty of Criminal Justice and Security, University of Maribor (FVV UM). He has previously served as Vice-Dean for Research, Head of the Institute of Criminal Justice and Security, Dean of FVV UM, and President of the University of Maribor Management Board. He has also been a member of several university committees and a UM Senator. He was the first Head of the Doctoral Program in Criminal Justice and Security (2007–2015) and leads the first research program group at FVV UM, *Security and Safety in Local Communities* (since 2015). For his research, collaboration with practice, and contributions to the development of criminology and criminal justice at both national and international levels, he has received the *G.O.W. Mueller Award from the Academy of Criminal Justice Sciences* (2024) and the *Freda Adler Distinguished Scholar Award from the American Society of Criminology* (2022). He also received the *Zois Award for Ecological Criminology (Social Sciences)* in 2014. He is the author and editor of several monographs and a member of editorial boards of journals and book series in criminology published by international publishers. He is the Editor-in-Chief of the *Journal of Criminal Investigation and Criminology*, indexed in WoS and Scopus.

Domen Mongus, Full Professor at the University of Maribor, is the Head of the GeMMA Laboratory at the Faculty of Electrical Engineering and Computer Science (FERI UM) and a recognized expert in geospatial analytics and artificial intelligence. He has received

numerous national and international awards for his scientific research work and is also well known for his extensive collaboration with industry.

Andreja Nekrep, M.Phil., is Head of the Department for Research and Arts at the University of Maribor. She has been active for many years in the management and development of research activities and participates in both national and international projects.

Dušica Pahor, Professor Emerita of the University of Maribor, M.D., specialist in ophthalmology, served as Vice-Dean for Science and Research at the Faculty of Medicine, University of Maribor (MF UM), from its founding until her retirement in 2024. For twenty years, she chaired the Habilitation Committee, the Committee for Scientific Research, and was Head of the Chair of Ophthalmology at MF UM. She has held numerous roles, including member of the UM Senate (2008–2024), member of the Committee for Scientific Research (2004–2024), current member of the UM Habilitation Committee (since 2014), member of the UM Statutory Committee (since 2019), and Chair of the Ethics Committee (since 2021). Since 2008, she has been Editor-in-Chief of *Acta medico-biotechnica*, which has twice received the Slovenian Science Foundation Award (2012, 2024). She was twice appointed by the Government of the Republic of Slovenia, on the proposal of UM, to the Committee for Awards and Distinctions for Outstanding Achievements in Scientific Research (2010–2013, 2022–2025). For her contributions to the development of MF UM, she received several faculty and university awards. She actively participated in the development of student research work at MF and initiated the idea of Dean's Awards. She supervised students in research assignments and, under her supervision, students earned three UM MF Dean's Awards and two UM Perlach Awards. She is a founding member and Vice-President (since 2017) of the Slovenian Medical Academy. For 23 years, she was Head of the Department of Ophthalmology at UKC Maribor, where she received the institution's highest lifetime achievement award – the *Dr. Zora Janžekovič Gold Medal*. In 2024, she was awarded the title of Professor Emerita by the University of Maribor.

Robert Presker, Professor of Sociology and M.A. in Translation and Interpreting for English, is Head of the Department of Development and Student Affairs at the Rectorate of the University of Maribor. He is responsible for coordinating strategic planning, the internal system for monitoring and assuring quality at the University of Maribor, and external evaluation processes at the University of Maribor. He collaborates professionally with the Slovenian Quality Assurance Agency for Higher Education (NAKVIS) on national and international conferences and projects related to quality in higher education. During his studies, he was already involved in evaluating higher education institutions and served as Vice-Rector for Student Affairs at the University of Maribor.

Vesna Rijavec is a Full Professor and Vice-Dean for International Affairs and Promotion at the Faculty of Law, University of Maribor (PF UM). She is Head of the Institute for Civil, Comparative and International Private Law. From 2015 to 2023, she served as Dean of PF UM and leads the research group *Civil and Commercial Law*. She teaches civil procedure, European civil procedure, enforcement, non-contentious, succession, family, and arbitration law. She has published numerous influential scientific and professional discussions, articles and monographs in these fields. She has coordinated many international projects, including LawTrain, Train2EN4CE, and DigiGuard. She is a member of the European Academy of Sciences and Arts. She has received two honorary doctorates: one from the University of Graz and another from Uppsala University, in recognition of her extensive academic and research contributions.

Oto Rimele (born 1962 in Maribor) is a painter, visual artist, multimedia installation author, musician, and Full Professor of Drawing and Painting at the Faculty of Education, University of Maribor. He graduated from the Academy of Fine Arts in Ljubljana (1990), where he completed his painting specialization in 1992. In 2004, he received the Prešeren Fund Award for his exhibition *Illuminations* at the Božidar Jakac Gallery in Kostanjevica na Krki. He has exhibited widely in Slovenia and abroad and was featured

in the *Top Ten Contemporary Artists* publication (London, 2021–2023). Professor Rimele served as Vice-Rector for Arts at the University of Maribor (2011–2012). He proposed the establishment of the University Art Observatory, founded in 2011 by the Slovenian Rectors' Conference, and served as its long-time president. He was also the Head of the Department of Fine Arts at the UM Faculty of Education and a member of the UM Senate. Rimele is a profound researcher of light. He is widely admired for his paintings – objects, which he describes as “light catchers”. Through a painting process developed over many years, he achieves the impression of complete dematerialization of the exhibited artifacts. The material reality of the images eludes perception, while the viewer is captivated by color-infused shadows radiating like an aura around the object.

Andrej Sotlar is a Full Professor of Criminal Justice and Security at the Faculty of Criminal Justice and Security, University of Maribor. He served as Dean from 2015 to 2023 and is currently Vice-Dean for Quality and Development as well as Head of the Chair of Policing and Security Studies. His research, teaching, and professional work focuses on national security, security and safety in local communities, plural policing, extremism and terrorism, private security, detective activity, and municipal policing. He leads the central national conference pertaining to Criminal Justice and Security – Days of Criminal Justice and Security and co-organizes the annual conference Days of National Security. He is also Editor-in-Chief of the *Journal of Criminal Justice and Security*.

Pina Slaček is a graduate student in the Master's program in Entrepreneurship and Innovation at the Faculty of Economics and Business, University of Maribor (EPF UM). Since 2022, she has served as Vice-Dean for Student Affairs and President of the Student Council at EPF UM. She has been actively involved in student representation for six years, both at the faculty level (initially as a member of the student council, various senate committees, and as a tutor) and at the university level, where she and her colleagues from other UM faculties contribute to student life, advocate for student

interests, and help create a high-quality, pleasant, and inspiring academic environment.

Andraž Stožer is one of the youngest Full Professors of Physiology and members of the European Academy of Sciences and Arts. He is Head of the Institute of Physiology, Co-Director of the Laboratory Centre at the Faculty of Medicine, University of Maribor (MF UM), and President of the Quality Assessment Committee at MF UM. He teaches physiology to students of various disciplines at several UM faculties (MF, FZV, FF, and FNM), as well as at the Medical University of Vienna and the University of Szeged. He leads the research program group *Cell and Tissue Networks*, is a member of the program core *Data Science and Artificial Intelligence in Biomedicine*, and manages several projects. His research focuses on the mechanisms of development and treatment of type 2 diabetes, pancreatic inflammation, and bladder dysfunction. His group has published numerous high-impact articles in leading international journals. He has been awarded for his work by the UM Faculty of Medicine and the Slovenian Research and Innovation Agency (ARIS).

Tomaz Svete, born in 1956 in Ljubljana, is a Full Professor of Composition at the Department of Music, Faculty of Education, University of Maribor. He completed his studies in composition and conducting at the Academy of Music, University of Ljubljana, under Professors Dane Škerl and Anton Nanut, and later at the University of Music and Performing Arts Vienna under Professors Friedrich Cerha (“Diploma summa cum laude”), Harald Goertz (“Magister Artium”), and Otmar Suitner. He began his professional career as a composition lecturer at the Karl Prayner Conservatory in Vienna and has been teaching theoretical subjects at the Department of Music, Faculty of Education, University of Maribor since 1995. In the winter semester of 1999, he was a Fulbright Professor at the University of Hartford. His rich and diverse musical opus includes orchestral, vocal-instrumental, solo, and chamber compositions, as well as twelve operas, making him the leading living Slovenian opera composer. He has received numerous recognitions and awards, including the Prešeren Fund Award

(2019), the Kozina Award, the Theodor Körner Prize of the City of Vienna, and First Prize at the international competition for opera composition “Johann-Joseph-Fux 2000”.

Polona Šprajc is the Dean of the Faculty of Organizational Sciences of the University of Maribor. Her scientific and professional work focuses on the fields of organization and management, organizational and management theory, leadership, crisis management at national and multicultural levels, crisis communication, intercultural business environments, and business ethics. She mentors undergraduate and postgraduate students in research projects, theses, and doctoral dissertations. She has published over 100 scientific papers, including 15 indexed in JCR/Scopus databases. As a leader and member, she participates in the program committees of several scientific conferences and is involved in various consulting projects for the economy, as well as in national, regional, and international projects. She is a member of the Executive Board of the Slovenian Academy of Management.

Mojca Tancer Verboten, assist. prof. dr. is an expert and researcher in the fields of labour and social law as well as higher education. She is a member of the Expert Council for addressing professional issues related to the implementation of the Artificial Intelligence Act and a member of the Council of the Centre of Excellence for Integrated Approaches in Chemistry and Materials Technology. As a member of the working group of the Ministry of Higher Education, Science and Innovation, she contributed to drafting the proposal for the Higher Education Act. At the Faculty of Law, University of Maribor, she teaches courses in Social Security, Labor and Social Law, and at the Faculty of Medicine, University of Maribor, she teaches Ethics and Legal Aspects. She is one of the co-authors of the commentary on the Employment Relationships Act (3rd, updated and amended edition) and the Civil Servants Act. She is currently serving her third term as Secretary General of the University of Maribor.

Maša Tepić is a third-year undergraduate student in General Management at the Faculty of Economics and Business, University of Maribor (EPF UM). For the past three years, she has been actively involved as a member of the Student Council of EPF UM, where she collaborates with other members on numerous projects and contributes to improving student life at the faculty. In the past year, she has also become involved in the work of the Student Council of the University of Maribor, where she helps to organize projects and activities that connect students from different faculties. She believes that active participation in student representation is key to creating a high-quality academic environment.

Polona Tominc is the Dean of the Faculty of Economics and Business of the University of Maribor and a Full Professor in the field of quantitative economic analyses. Her research focuses primarily on entrepreneurship and the application of quantitative methods in management. She leads the research program Entrepreneurship for an Innovative Society and participates in the international project Global Entrepreneurship Monitor – GEM and the research network on women's entrepreneurship – DIANA. Since 2010, she has actively contributed as an expert at the Slovenian Quality Assurance Agency for Higher Education – NAKVIS, where she has led more than forty evaluations and accreditations of higher education institutions and programs. Within the international accreditation network AACSB, she conducts international evaluations of higher education institutions in the field of economics and business.

Natalija Ulčnik is a Doctor of Linguistic Sciences and Associate Professor of Slovenian language. She teaches at the Department of Slavic Languages and Literatures at the Faculty of Arts, University of Maribor, where she also serves as Deputy Head of the Department. Her research focuses on the development of Slovenian (standard) language, lexicology, lexicography, phraseology, and paremiology. She concentrates on linguistic development principles and changes in Slovenian, standard language variation, and the

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Boštjan Vlaovič is employed at the Faculty of Electrical Engineering and Computer Science of the University of Maribor. In 2018, he received an award for his pedagogical work. Since 2019, he has served as Vice-Dean for Education at the same Faculty. In 2021, he was appointed a member of the Education Board of the European

university alliance Athena. Since 2022, he has led the projects *Agile Development of Education and Micro-Credentials* and *Development of Flexible Learning Approaches with Micro-Credentials for the Digital and Green Transition of Education to Society 5.0*. In 2025, he was listed as an expert by the National Contact Point for the Slovenian and European Qualifications Framework. Since 2025, he has been the President of the Management Board of IZUM – Institute of Information Science in Maribor. For over ten years, he was a member of the Executive Board of the Slovenian Electronic Communications Society. He is a Senior Member of IEEE and an Honorary Member of the Slovenian Electrotechnical Society.

Joso Vukman, Professor Emeritus of the University of Maribor, began his academic career in 1973 at the School of Economics and Commerce (now the Faculty of Economics and Business, UM). In 1977, he earned his PhD under supervision of academic Prof. dr. Ivan Vidav (PhD), the founder of modern Slovenian mathematics. In 1990, he received the Boris Kidrič Fund Award (now the Zois Award) for significant scientific achievements in functional analysis. That same year, he joined the Faculty of Education, UM, where he served as Dean from 1999 to 2003. He was also the founding Dean of the Faculty of Natural Sciences and Mathematics, UM. The research of Professor Vukman lies at the intersection of functional analysis, ring theory, and functional equations. He has significantly influenced the development of the theory of functional identities, one of the most important theories in ring theory over the past thirty years. He is considered a pioneer and founder of theoretical mathematics at the University of Maribor. In 2023, he received the Zois Lifetime Achievement Award. He is ranked among the top 2% of scientists in the world according to the Stanford ranking.

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Her pedagogical and research work includes methodology of pedagogical research, pedagogical and humanistic aspects of kinesiology, health education, and the pedagogical concept of student well-being in schools. She is actively involved in the boards of the Slovenian Educational Research Association – SLODRE, the Slovenian Institute for Adult Education, and the Statistical Society of Slovenia. As a recipient of the prestigious *Japan Society for the Promotion of Science* scholarship, she spent two years at Okayama University in Japan. She has received several international awards for excellence in scientific research, including the *International Council of Sport Science and Physical Education Award* (2008), *European Association for the Philosophy of Sport Award* (2017), *Japan Society for Mixed Methods Research International Scholarship Award* (2019), and *Female Researchers Award* (2025).

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50 YEARS OF THE UNIVERSITY OF MARIBOR: HALF A CENTURY OF SCHOLARSHIP AND RESEARCH

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This scientific monograph, created to commemorate the significant anniversary of the University of Maribor, explores various aspects of its establishment, organization, and development, providing a comprehensive overview of the University's fifty-year journey as Slovenia's second-largest university. The intertwining of critical historical events, significant contemporary conditions, and an optimistic view of the future is thoughtfully encapsulated in eleven chapters. Emphasis is placed on the efforts leading to the establishment of the University, along with an overview of the legal foundations for its existence and organization. The spatial development of the University in relation to social, political, and urban resources is discussed, and trends in employee movements across different periods are highlighted. Educational activities and diverse study programmes are outlined, reflecting the community's needs. Additionally, this monograph examines scientific fields and research activities, evaluates research efficiency and competitiveness, and underscores the artistic traditions at the University of Maribor. It is dedicated to the students and their vital role within the university environment, and also addresses the University's international cooperation and emphasizes the importance of strengthening internationalization. The sustainability of the University of Maribor is explored as part of its commitment to long-term competitiveness, with a forward-looking perspective on European integration, lifelong learning, digitalization, and the green transition. This monograph offers an important insight into the fifty-year existence of the University of Maribor and provides valuable data regarding its growth, impact, and establishment within the broader academic landscape.

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University of Maribor Press

And in the end, back to the beginning.

Standing from left to right: Bogdan Kavčič, Stojan Vrabl, Ljubomir Črepinšek, Bruno Hartman, Šime Ivanjko, Branko Leskovar, Karel Koren, Borut Belec.



The photograph was taken on June 12, 1975, at Krekova ulica 2 in Maribor during the signing of the self-management agreement on the association into the University of Maribor, which was sent on June 13, 1975, for confirmation by the Assembly of the Socialist Republic of Slovenia.

Seated from left to right: Rudi Crnkovič, Vladimir Bračič, Dušan Bobek.



